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[facing p. 1 (d_1)]

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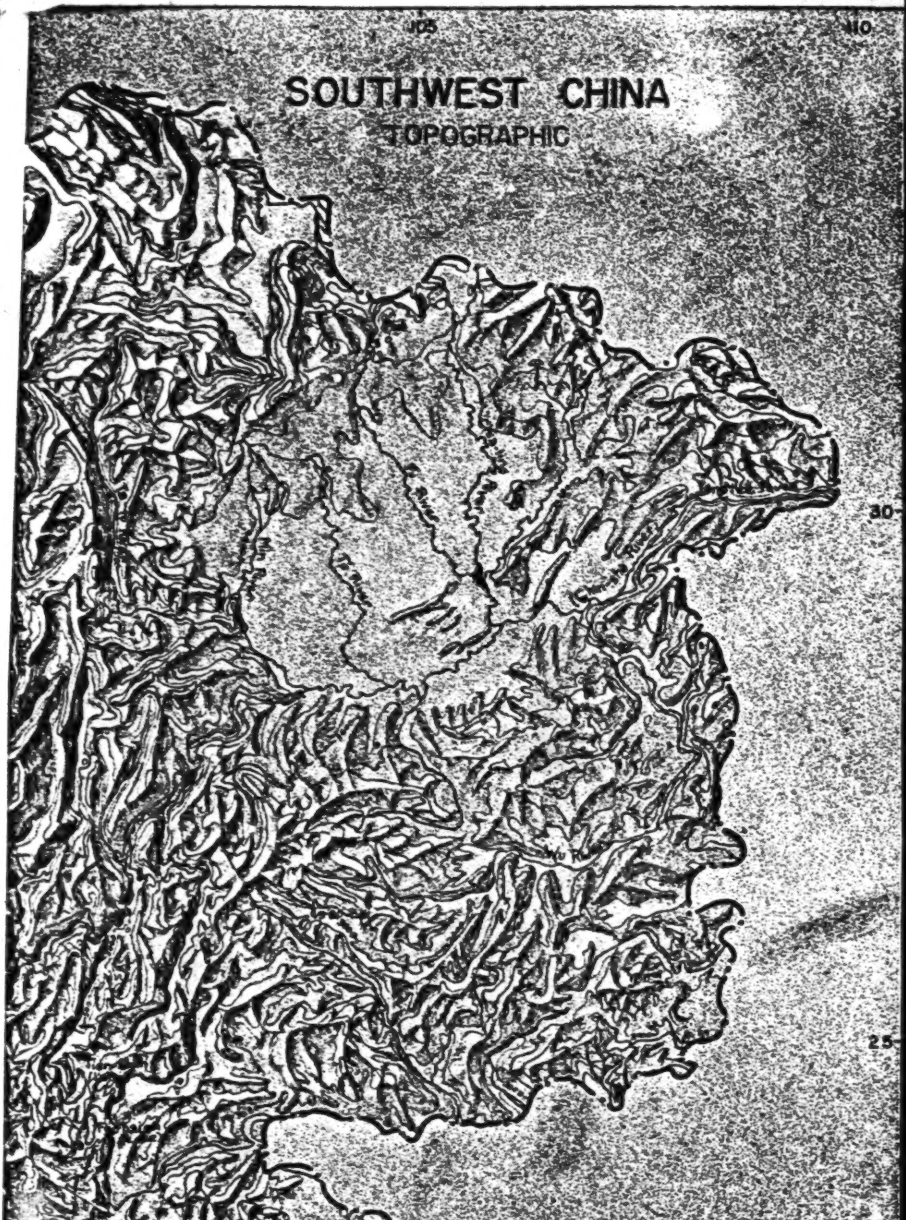
SOUTHWEST CHINA
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[facing p. 1 (d2)]

Annex "A," Subparagraph la',
Sociological Background

GEOGRAPHICAL SETTING

131 The Southwest China Region, comprising the provinces of Szechwan, Yunnan, and Kweichow, is adjacent to Chinghai, Kansu, and Shensi provinces in the north across the Tanglha, Min, and Tapa mountain ranges. In the east it shares a boundary with Hupeh, Hunan, and Kwangsi provinces. The western limit of this region is an arbitrary line drawn vertically across the Tibetan massif to separate this region from Tibet.[1] This region defines China's southern frontier bordering upon Indochina and Burma. It lies between 21° and 34° North latitude, and 97° and 110° East longitude, covering an area of 1,146,345 square kilometers (442,600 sq. mi.) in which lives a population of 98,195,110, or about 16.9 per cent of China's total population.

I. TOPOGRAPHY

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A. Mountains and Rivers

The elevation of the Southwest Region is quite high in the northwest, somewhat lower in the south, much lower in the southeast, and at its lowest point in the northeast (the Szechwan Basin). Because of the particular features of these mountains and rivers and their relative positions, it seems best to discuss them together.

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[1] Hsin-hua Yüeh-pao [New China Monthly], April 1955, pp. 15-16. For details of political subdivisions, see chapter on Structure of Government.

The mountains and rivers in this region appear to originate in the same general area in the northwest. The mighty Tanglha Range, with summits over 7,000 meters (22,400 ft.) high, enters this region from northeastern Tibet and spreads south. The even mightier Himalaya and Nyenchentanglha ranges extend into this region just below the Tanglha, bending south to join the jagged tableland of western Yunnan Province. The rivers are sandwiched between these north-south mountain ranges. Between the Himalaya and the Nyenchentanglha ranges run the middle reaches of the Brahmaputra River, locally known as Yalutsangpu, which turns due south and leaves China between 95° and 96° East longitude. Out of the Tanglha Range flows the Nu River (the Angry River, the upper reaches of the Salween) which fills the deep gully between the Poshula Range (also known as Tan-ta, and its southern portion in Yunnan, as Kao-li-kung) and the Nu Range (the Angry Mountain, also known as T'a-nien-t'a-weng). To the east of the Nu Range and parallel to it across another dividing river (the Lan-ts'ang, upper reaches of the Mekong River) lies the Ning-ching Range. Its southern extension in Yunnan Province is called the Yün-ling.

133 The famous Yangtze River washes the eastern foot of the Ning-ching Range, but in this section the river is referred to as the Chin-sha River (Golden Sand River). Between the Golden Sand River and the Ya-lung River (another name for it is the Nya) is the Sha-lu-li Mountain. Flanking the former Sikang-Szechwan provincial border are the Ta-hsüeh and the Ch'iung-lai ranges. The southern finger of the Ta-hsüeh Range is Che-to Mountain, which has the highest peak in this region (Minya Konka, 7,700 m. or 22,400 ft.). The southern extension of the Ch'iung-lai is Ta-liang Mountain, home of the Yi minority. The little appendage protruding west from the middle of the Ch'iung-lai Range forms the celebrated 0-mei Mountain which, although only 3,035 meters (9,712 ft.) high, is the most famous sacred mountain in West China and the site of hundreds of temples.

The mountains so far mentioned all run northwest-south. Other mountains of less magnitude violate this general pattern: the Wu-meng in northeastern and the Liu-shao in eastern Yunnan Province, both extensions of the Yün-ling mentioned above, and the Min-shan mass in northwestern Szechwan Province, which with the Ta-pa form the northern wall of this province. The Wu-shan Range guards the northeastern gate of this region through which the Yangtze River flows in a series of gorges (the awe-inspiring gorges of the Yangtze, about 170 km.

133 or 105 mi. in length).[2] In Kweichow Province, Lou-shan Mountain increases the elevation of the land in the north as does Yün-wu Mountain in the land to the southeast. Compared with the mountains to the northwest, these mountains are but minor elevations on the edge of this expanse of tableland.

Framed by high mountains the rivers thus far mentioned are separate systems, each running its own course northwest-south, with the exception of the Golden Sand, which ends its southward course in northwestern Yunnan and curves back and forth before reaching the Pacific Ocean some 3,000 miles east. The Golden Sand (or Yangtze) River system is the most extensive, receiving the Ya-lung in the former Sikang Province and four other sizable rivers (Ta-tu, Min, Fu, and Chia-ling) in Szechwan Province. There are very few tributaries of the Yangtze on its southern bank apart from the Wu River issuing from central Kweichow Province. There is a theory supported by geologic findings that centuries ago the Golden Sand River did not curve back as it entered northwestern Yunnan Province, but continued southeast to the Gulf of Tonkin by way of the Red River. The present course of the Golden Sand River in northwestern

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[2] Huang Yen-p'ei, Shu Tao [Szechwan Roads], Shanghai, K'ai-ming shu-tien, 1936, p. 23.

133 Yunnan remains very close to the source of the Yüan River (upper reaches of the Red River). At one point the two rivers are only a few miles apart and there is no towering division to keep them from flowing into each other.[3] It is also said that after the Golden Sand changed its course to the east and abandoned the Red River, it filled the Szechwan land depression and made a huge lake. The gorges in the Wu-shan Mountain provide an outlet for the river.

The mountain ranges in the western portion of this region are high, rising from intervening elevated valleys up to 4,000 meters (12,000 ft.) above sea level. They are rugged, desolate, and cold, with the snow lines between 4,000 and 6,000 meters (12,800-19,200 ft.), depending on local precipitation.

Lack of reliable surveys has caused geographers to consult travel notes which often contain hearsay information about the names of certain mountains and their systems. In addition, there is the matter of local dialects which makes it extremely difficult to arrive at a commonly acceptable translation of certain names.[4] The name of the Ta-hsüeh Range, for

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3. Joseph Needham, Science and Civilization in China, Vol. I, Cambridge, Cambridge University Press, 1954, p. 61.

4. George B. Cressey, China's Geographic Foundations, New York, McGraw-Hill, 1934, pp. 37-38, p. 274.

133 example, means "Big Snow." But local people in many communities use the same name when they refer to other mountains. The name Himalaya, incidentally, is Tibetan for "Snow Mountain."[5]

The rivers on the west side of this region are turbulent flows and objects of fear and superstition to the aborigines. Bamboo-cable bridges and buffalo-skin rafts are dangerous and impractical means for crossing these rivers. In this connection, accounts of the construction of the Hui-t'ung Bridge on the "Stilwell Road" in western Yunnan and the Communist epic crossing of the Ta-tu River in eastern Sikang during the 1934-35 Long March should be recalled. Portions of the rivers in Szechwan Province, where wooden junks serve as local transport, are navigable; other rivers in this region are not.

B. Plains and Lakes

133 311 The Chengtu Plain, heart of the Szechwan Basin, is undoubtedly the largest area of level land in this region -- 6,000-7,000 square kilometers (2,280-2,680 sq. mi.).[6] It is extensively cultivated, and its productivity equals

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[5] Ko Sui-ch'eng, Chung-kuo Ti-li Hsin Chih [New Geography of China], Shanghai, Chung-hua shu-chü, 1950, chap. IX, p. 243.

[6] Chiang Chün-chang, Hsi-nan Ching-chi Ti-li [The Economic Geography of Southwest China], Shanghai, The Commercial Press, 1946, pp. 9-25.

133 the riparian "rice-bowl" section of Hunan
311 Province to the east. The Chung-pa Plain,
northeast of Chengtu in the same province, is
133 another extensive flatland. Outside the basin, the plains are scattered and consist of high valleys between towering mountains or "grasslands" on the Tibet-Sikang highland. The expansive valley around Kweiyang, provincial capital of Kweichow, for example, is about 1,000 meters (3,200 ft.) above sea level. Similar in nature is the Kunming plain, except that it rises to a height of 2,000 meters (6,400 ft.). Farther north are the flat stretches around Pa-an (or Pa-t'ang) on the former Ch'ang-tu--Sikang border, which is an open section of the Golden Sand River valley, rising 2,600-3,000 meters (8,360-9,600 ft.).[7] Many small lakes are found in these plains. The Szechwan Basin, with its lattice work of waterways, is without lakes, but Yunnan, Kweichow, and the former Sikang Province have many. Ts'ao-hai Lake in Kweichow and Erh-hai and T'ien-ch'ih lakes in Yunnan, are noted bodies of water. Warm springs also abound in these two provinces.

132 C. Climate

The climatic zones in this region are best

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[7] *Ibid.*, pp. 9-11.

2: Rock
133, 137, 487

AF16 Southwest China AF16

[For data on Topography, Flora and Routes, see Category 116, pp. 217-354, 388-428.]

(Courtesy Nat. Geogr. Soc.)

SHAN-TZU-TOU, THE HIGHEST PEAK OF THE YÜ-LUNG SHAN

玉龍山與白水河。

Photographed from an elevation of 10.500 feet, from a ridge overlooking the upper Pai-shui or White water, the Gyi-p'ĕr of the Na-khi. The main glacier on the eastern slopes is the source of the Gyi-p'ĕr. The trees in foreground are pines and spruces, the pale foliaged trees poplars in autumn garb. On the higher slopes are firs and spruces, the lighter-colored trees, larches.

[Frontispiece]

PART I

INTRODUCTION

THE PROVINCE OF YÜN-NAN

101 Yün-nan 雲南 (South of the clouds) is the second largest province of China,
161 and is situated in the extreme south-west of that vast country. Its area is approximately 146,700 square miles, and in 1933 it had a population of 11,795,486,
[212] or about 80.4 persons to the square mile. Of this population 6,095,549 were male, and 5,699,937 were female, and 88.88 per cent of the entire population was illiterate.

131 In the north it borders on Ssu-ch'uan 四川 and Hsi-k'ang 西康, in the west on Hsi-tsang 西藏 (Tibet) and Mien-tien 緬甸 (Burma). In the south it adjoins the south-eastern Shan States of Burma and also Indo-China, while in the east it borders on the Chinese provinces of Kuei-chou 貴州 and Kuang-hsi 廣西.

● 133 Yün-nan is a high table-land, intersected by some of the largest rivers of Asia, such as the Yangtze, Mekong, and Salween, and by the eastern branch of the Irrawadi (the Ch'iu Chiang 俅江 of the Chinese) in the extreme west. These rivers flow parallel to each other for a considerable distance in terrific gorges. The intervening mountain ranges, which in the extreme north-west reach heights of 22,000 feet, are crowned by eternal snow. Of these the Mekong-Salween divide forms, in part, the Tibet – Yün-nan border. The altitude increases in the north-west, and we find towns at 11,500 feet elevation.

[361] In the south, the province is partly covered with tropical jungle where tigers
[243] roam and malaria is prevalent, and where the Tai or Shan hold undisputed sway, as no Yünnanese will live below an altitude of 4,000 feet. Here the water-buffalo is at home, and rice is the main crop.

231 In the north the yak grazes on the high alpine meadows, and barley is grown at 12,000 feet. The yak furnishes the inhabitants with meat, milk, butter and cheese; its dung (argols) is used as fuel and its hair for the weaving of cloth for tents; it also serves as a transport animal. Here barley takes the place of rice and is the staple food of the Tibetans.

101 The capital of the province is Yün-nan fu, situated at an altitude of 6,400 feet, on a large plain surrounded by mountains. Near it is the famous lake known as Tien Ch'ih 滇池 or K'un-yang 昆陽. To-day Yün-nan fu is called K'un-ming 昆明, which, during the reign of Han Wu Ti, was the land of I-chou Chün 益州郡. While the name K'un-ming is an ancient one it seems not to have been applied to the land which bears that name to-day prior to the Yüan (Mongol) dynasty. The *K'un-ming hsien chih* speaks of three K'un-mings. In the oldest geographical record of Yün-nan we read, however, that the name K'un-ming had first been given to the lake at Yün-nan fu by General Chuang Ch'iao of the State of Ch'u in about 280 B.C. (*see* Note 3, page 6).

As this is not a history and geography of the whole of Yün-nan, but only of a specified area in its north-west, namely the region now occupied by the Mo-so

In the 17th year of Shun-chih (1660) the wall was in bad condition and the salt revenue was used to rebuild it. It was again rebuilt in the 20th year of K'ang-hsi (1681). Afterwards it was frequently repaired, the last time by Magistrate Chou Hsiung 周熊 in 1797. 173 712

To the north-east of the city lay the walled towns of Ching-i ch'eng 井邑城 and Huang ch'eng 隍城; to the west lay Han ch'eng 漢城. Something over 10 li to the east of the wall is the village of Ku-ch'ang-ts'un 穀昌村, which under the Han dynasty was part of the ancient territory of the Ku-ch'ang Wang (King of Ku-ch'ang).[9]

In the 10th year of Cheng-yüan 貞元 (794) the Nan-chao Kingdom attacked the Hsi-jung 西戎 (Western Jung) tribes, and transported the Shih 施, Shun 順 and Mo-so 麼些 tribes, many thousands strong, to this locality.

2. — THE ROAD FROM K'UN-MING TO TA-LI

First stage. — From K'un-ming the trail leads west across the plain for 30 li until it reaches the foot-hills and the famous Pi-chi Kuan 碧雞關 (Jade-fowl Pass), where there is a hamlet and a temple on a hill overlooking the pass. 133 487 This temple was built in the 22nd year of K'ang-hsi, the seventh month and 12th day (September 2nd, 1683). The elevation of the village is 6,550 feet. The motor-road follows the foot of the pass, zigzags up the hill, and then bears to the west.

From Pi-chi Kuan to An-ning chou 安甯州 (now An-ning hsien) is 50 li. An-ning is a walled city lying in a valley at an altitude of 6,000 feet. In ancient days it was the T'ang-lang-ch'uan 螳螂川 (Mantis stream) of the Tien Kingdom. A small trail here branches off to the town of Wu-ting 武定, three stages to the north of K'un-ming and a distance of 210 li from An-ning. (A motor-road has now been built.)

The road to An-ning winds between wheat-fields which are terraced and situated between low hills with limestone outcroppings. Coolies, mostly Min-chia 民家 (for description see pp. 41–43), men and women, are met with, carrying blocks of salt on a framework, the load being 100 catties, or about 133 lb. Others bear loads of firewood, charcoal and rice for the market of K'un-ming. 482 438 The salt comes from Pai-yen ching 白鹽井 (White salt-well) near the town of Yen-feng 鹽豐. A trail connects the salt-wells with Ch'u-hsiung.

An-ning hsien. — In the Han dynasty, An-ning was the Lien-jan hsien 連然縣 of I chou. In the beginning of the Chin dynasty (about 265–266) it belonged or was subject to Chien-ning Chün 建寧郡. Under the Sung and Ch'i dynasties its name remained unaltered. In the beginning of the Sui dynasty (about 581–582) the city was subject to K'un chou. 173

During the reign of T'ang Wu-te 武德 (about 618–619) its name was changed and An-ning hsien magistracy (still under K'un chou) was established. At the beginning of T'ien-pao 天寶 (about 742–743) An-ning hsien fell into the hands of the Man (savages) who had rebelled owing to extortionate taxes and forced labor.

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[9] The *K'un-ming hsien chih*, ch. 9, fol. 1a, states that there is no Ku-ch'ang Wang listed in the *Han Shu* and that the character *wang* was by mistake used for *hsien* 縣.

173 Afterwards the city was captured by the Meng family (Meng shih 蒙氏), the founders of the Nan-chao Kingdom. The T'ang dynasty sent soldiers to suppress the Man. P'i-li-ko, the fourth Nan-chao King, with his soldiers joined the T'ang soldiers and pacified the savages. Nine years afterwards when the Nan-chao Kingdom had become stronger, the Ts'uan 爨 savages were weakened. The robbers (Ts'uan) however captured Yao chou 姚州, and although they again attacked An-ning, it remained in the possession of the Nan-chao kings.

The Tuan family, which in 937 succeeded to the throne of Nan-chao, made no changes and, during the reign of Tuan Ssu-lien 段思廉 (1044–1075), Kao Chih-sheng 高智昇, marquis of Shan-shan, was commissioned to guard and protect their territory.

In the beginning of the Yüan dynasty (1253) it was dependent on the Yang-ch'eng-p'u 陽城堡 [10] Wan-hu fu. In the beginning of Chih-yüan 至元 (1264 or 1265) there was established the Ch'ien-hu so 千戶所 (Sub-military station of 1,000 families) of An-ning. Afterwards the name was changed to An-ning chou. At the beginning of the Ming dynasty it remained unaltered.

The native prefect, a member of the Tung family 董氏, governed hereditarily the registered families of 10 li (10 communes) and one hsien.

The *Yün-nan T'ung-chih*, ch. 141, p. 31a . . . 32a, has the following to say about the Tung family: "In the reign of Hung-wu (1368–1398) Ho-ch'ing fu 鶴慶府 was established. In the 17th year (1384) Tung Tz'u 董賜 was made native fu-prefect of Ho-ch'ing (on account of his great merit). He was originally native chou-prefect of An-ning of which city he was a native. His son, Tung Chieh 董節, also on account of merit, was made hereditary native chou-prefect of An-ning in the same year his father was transferred to Ho-ch'ing. (See also *Ho-ch'ing chou chih*, ch. 20, fol. 20a.) He established schools and built the city yamen, gave lessons in agriculture and sericulture, and instructed the people in the cultivation of trees, etc."

133 *Second stage.* — From An-ning hsien to Lao-ya-kuan 老鴉關 (Crow pass)
is a distance of 70 li. The trail leads up the hills to a hamlet called Ts'ao-p'u
487 草鋪 (Grass shop), which is 10 li from Ch'ing-lung-shao 青龍哨 (Green dragon
137 guard-station), the lunch-stop of the day. It continues on over wild, arid country — an undulating plateau of gravel, red soil, yellow sand and clay. The slopes are covered with pine scrub (*Pinus yünnanensis*). Sixty li from An-ning hsien the village of Lu-piao 祿(驃)鰾 is reached. After passing through a circular terraced basin, the trail climbs to Lao-ya pass on which is a temple now occupied by the militia. The altitude of Lao-ya Kuan is 6,300 feet. Lao-ya-kuan village, which is not touched by the motor-road, extends from the top of the pass down into a little plain, and belongs to the magistracy of Lu-feng hsien 祿豐縣.

Third stage. — From Lao-ya-kuan to Lu-feng hsien 祿豐縣 is 80 li. The trail leads up through a rocky ravine to a pass which is called Yang-lao-shao 楊老哨, then past the hamlet of Pei-hou-ssu 背後寺, descending from 6,000

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[10] This is the Chin-ning hsien 晉寧縣 on the south-east bank of the lake at K'un-ming. There was an outer and an inner walled city in the chou; the inner was called Yang-ch'eng-p'u and was built by the Meng family.

feet into a deep valley in which is situated the long village of Yao-chan 腰站, 133
the regular lunch-stop for the caravans. The motor-road avoids Yao-chan
and keeps to the hill-side, descending in great zigzags to the west of the place. 487
The steep valley slopes are eroded, the strata being perfectly horizontal and 137
in various colors, such as grey and yellow clay, gravel and red soil; the land has sunk and lies tilted considerably, especially in the north-eastern part, exposing the above-mentioned varicolored strata and giving the whole landscape a peculiar appearance.

Lu-feng [11] is situated in a fertile plain at an elevation of 5,350 feet. It is a town now much dilapidated and surrounded by a low wall. The original earthen wall was built in the 12th year of Yüan Chih-cheng 至正 (1352). In the 35th year of Ming Wan-li (1607) the town was burnt by the native bandit, A-k'o 阿克 (tribal chief of Wu-ting), and the magistrate pulled down the earthen wall and built a brick one, 3 li in circumference and 16 Chinese feet high. This wall was destroyed by an earthquake in the ninth year of K'ang-hsi (1670) and rebuilt. It was repaired frequently afterwards up to the 10th year of T'ung-chih (1871).

To the west of Lu-feng, almost adjoining the wall, flows the Hsing-lo Ho 星羅河. The bridge spanning it is called Hsing-hsü ch'iao 星宿橋 (Bridge of the zodiacal constellation), another name for it being Yung-feng ch'iao 永豐橋. It was commenced in 1612 and finished in 1614 by Hsiang Chao-lin 向兆麟, magistrate of Lu-feng.

Fourth stage. — From Lu-feng to She-tzu 舍資 (also written 捨資) is a distance of 90 li. From Lu-feng the road leads through the west gate, known as the Ch'ing men 清門, over the Hsing-hsü bridge. The Hsing-hsü Chiang 星宿江 or Ho 河, another name for the Hsing-lo River, is called the Lu-shih Chiang 綠汁江 on the Yün-nan military map. It flows west of the walled town and becomes an affluent of the Red River (the Chinese Yüan Chiang 元江) which debouches into the sea in Indo-China.

The trail crosses the plain to the foot of the hills which it ascends. This
particular stretch of trail is the worst on the entire journey to Li-chiang. All
the villages have been burned by bandits, only the charred mud walls are [579]
standing and the fields lie waste. The mountains of this region had been for years the stronghold of the large robber bands which harassed the province.

Half-way up the mountain-side, nestled in the forest is an old temple, 10 li from Lu-feng. From a pass, 6,300 feet high, which is the top of the ridge encircling the western side of the Lu-feng plain, one has a wonderful view over a vast sea of mountains, here and there being a tiny level area with a few hamlets and fields. The trail continues below the top of the ridge along grassy and wooded slopes. Ahead are conical mountains thickly wooded with pines;

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[11] In ancient days it was the Pai-ts'un 白村 (White village) of the Lu-peng tien 碌琫甸 (tien of Lu-peng). The district was inhabited by the Wu-p'o-man 烏婆蠻 (Black P'o savages). Their land was malarial and hot, and they thus had no definite dwelling. They were ruled in the period of Ta-li 大理 (937–1094) by I-sheng 義勝, the son of Kao Chih-sheng 高智昇. In the beginning of the Yüan dynasty the town was dependent on the Ch'ien-hu so of An-ning. In the reign of Chih-yüan 至元 (1341–1367) it was established as a hsien, subject to the chou of An-ning. The peasants of three li registered there. To-day it is a full-fledged hsien city.

487 at the foot of the nearest, the trail, now a deep trench, enters a ravine descend-
137 ing to a stone bridge and then to what was once a hamlet called Hsiang-shui-
● 133 kuan 响水關 (Rippling water pass). It is a wonderful spot in the midst of
[579] densely forested mountains and lovely clear streams. This was the head-
quarters of the robber bands. Thanks to the energetic rule of the then gov-
ernor, Lung Yün 龍雲, many of the bandits were killed, the remainder dispersed, and a fort erected where soldiers are always on guard.

The trail winds in and out between high, forested spurs, finally ascending to a pass of 6,500 feet elevation. It descends into a small valley, across low ridges and thence to the small, forlorn hamlet of She-tzu at 6,100 feet. After having been plundered several times by the bandits who once occupied it for many months in 1927–28, a mud wall has been built around it, and watchtowers on the tops of the surrounding spurs. She-tzu, which formerly belonged to Kuang-t'ung hsien, is now a sub-divisional magistracy, in the district of Hei-ching 黑井 (Black salt-well — in contradistinction to the Pai-
[317] ching 白井, White salt-well). In Hei-ching are two wells called A-lou ching
阿陋井 and Yüan-yung ching 元永井. Large caravans loaded with salt make their way from here to the capital.

Fifth stage. — From She-tzu to Kuang-t'ung hsien 廣通縣 is a distance of 60 li. The trail now passes across the She-tzu plain and enters a small ravine leading to a pass, at 6,550 feet and 15 li from She-tzu, where is a shrine — a large old temple dedicated to the famous hero Kuan Yü 關羽 of the San Kuo 三國 (Three Kingdoms), later canonized as Kuan Ti 關帝 and made a god in 1594 by Ming Wan-li. The pass is called Le-ma Kuan 勒馬關 (Rein-in the horse Pass). From this pass, once a dangerous spot held by bandits, the trail descends to the edge of a small, cultivated plain on which stands the village of Hei-chü 黑苴, elevation 6,125 feet, consisting of about 25 houses; wheat, barley, and broad beans are cultivated. A number of peasants were
[423] encountered here, carrying large pine logs by means of straps over their fore-
heads and wooden yokes around the backs of their necks, the yoke resting on the shoulders (PLATES 7, 8).

The trail ascends steeply — the hill-side being covered with magnolias, Michelias, *Castanopsis Delavayi*, *Ketteleria Davidiana*, pines, Pyrus or wild pears, oaks, etc. — to a pass at 6,500 feet and descends to the village of Meng-ch'i-p'u 蒙七舖, elevation 6,425 feet. This is the regular lunch-stop. The path leads on across a spur into a depression which it encircles, and then climbs to a higher spur, elevation 7,110 feet. It continues on top of the spur for some time, leaving a deep valley to the right, and descends steeply over a mere rock pile of a trail to the plain of Kuang-t'ung and the dilapidated, ruined town of that name. Kuang-t'ung must once have seen better days, judging by its large now ruined temples. Its elevation is 6,300 feet.[12]

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[12] The aboriginal name of Kuang-t'ung was Lu t'an 路賧. [The character *t'an* 賧 stands for the Tai word *kieng* or *shieng*, as in Kieng-mai, a town in northern Siam. The word is often written 睒 *shan*, and 瞼 *chien*, the latter probably in imitation of the Tai sound. The meaning of the Tai word is a State, a province or a town.] In the beginning of the Yüan dynasty (1253) the Lu-t'an ch'ien-hu 路賧千戶 (Lu State of 1,000 families) was established. In the 12th year of Chih-yüan 至元 (1352) [the *Kuang-t'ung hsien chih*, ch. 1, fol. 5b, states the 11th year (1351)], it became Kuang-t'ung hsien dependent on Nan-an chou 南安州,

Sixth stage. — From Kuang-t'ung to Ch'u-hsiung 楚雄 is a distance of 70 li. 487
The trail follows the foot-hills which encircle the plain, then ascends a spur 133 ●
covered with a semi-xerophytic type of vegetation, consisting mostly of 137
Castanopsis Delavayi, pines, Ketteleria, Euonymus, Lyonia, *Rhododendron decorum*, *Rhododendron Scottianum*, Quercus, Sophora, Pyrus, *Rubus luteus*, *Rosa Banksia*, *Osteomeles Schwerinae*, etc.

The trail continues to ascend the gravelly spurs to the summit of a ridge on 175
which are situated a few houses which compose the hamlet of Hui-teng-kuan 487
回蹬關, elevation 7,050 feet. This place is of historic interest. In the 23rd
year of Yüan Chih-cheng 至正 (1363) a general, by name Ming Yü-chen 133
明玉珍, led 30,000 soldiers to this pass, coming from Ta-li to attack Shan- 137
shan, the present K'un-ming. From Ta-li fu he was pursued by Tuan Kung 段功, who ruled from 1345–1366 as hereditary Governor of Ta-li fu. Ming Yü-chen and his accomplice, Li Chih-ma 李芝麻, as well as his younger brother, Ming Erh 明二, and others, were the leaders of the Red Turban brigands; they and their soldiers were defeated here by Tuan Kung. Hence the name of the pass, Hui-teng (To return and to struggle), having reference to his army turning about and fighting Tuan Kung. It can also be translated "to turn the stirrup."[13]

From the pass the trail continues at 6,900 feet elevation (watch-towers are 487
on the pass as well as on the hills beyond), the grade being easy and the path 133
sandy; it descends 600 feet into a ravine which has been banked by a dam, 137
creating a deep, blue pond. From here the trail ascends to the village of Shih-chien-p'u 石硐舖, situated on the edge of a plain at an elevation of 6,230 feet and 30 li from Kuang-t'ung. Thence it follows along scrub-covered hills for several li at the edge of the plain, then directly across the plain, which is barred by a low red spur. On this plateau is situated the hamlet of Ling-hsü 凌墟, elevation 6,200 feet. Here a valley opens, with a stream called the Lung Ch'uan 龍川 (Dragon River) which has its source at the Ying-wu Kuan 英武關 and flows south of Chen-nan hsien past Ch'u-hsiung, thence north into the Yangtze at Lung-kai 龍街 north of Ma-kai 馬街.[14]

The trail follows up-stream on level ground partly paved, partly sandy, — the hills to the left being covered with pines and large deciduous trees (oaks, etc.) and the fields cultivated with rice — crosses the red spur just mentioned and descends into the plain of Ch'u-hsiung at an elevation of 6,300 feet.

The town of Ch'u-hsiung is walled, rather long, and possesses about 15,000 361

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south of Ch'u-hsiung. In the beginning of the Ming dynasty it was again changed (that is, 487
it no longer belonged to Nan-an chou) and henceforth came under the jurisdiction of Ch'u-hsiung and had subject to it the peasants of four li. In ancient days Kuang-t'ung had no wall; the first brick wall built was in the 45th year of Ming Wan-li (1617). It was 3 li in circumference and 18 Chinese feet high. It had four gates, each with a loft, or tower-like superstructure, and was surrounded by a moat 5 feet broad and deep.

[13] The *Ch'u-hsiung fu chih*, ch. 1, fol. 25b, states that Ko-lo-feng intended to attack the Yünnan T'o-tung ch'eng and arrived at this pass with his troops. He encountered a heavy thunderstorm when his captain advised him to return with his troops, hence the name.

[14] East of Chü-li-p'u 苴力舖 the stream is called Pai-lung Ho 白龍河. Another name for it is Hung Chiang 虹江 (Rainbow River). It receives many small affluents on its way past Chen-nan, especially from the north, such as the Shuang-lung Ho 雙龍河, Yang-ch'i Ho 陽起河, and Tzu-tien Ho 紫甸河.

361 487 inhabitants. In the Han dynasty Ch'u-hsiung belonged to the territory of I Chou. Afterwards it became the dwelling-place of miscellaneous Man (savages) carrying on agriculture and pasturage. They were called the O-lu 峨碌. In course of time, Wei-ch'u 威楚, headman of the Ts'uan, built a tamped earth wall, and Ch'u-hsiung became the *t'an* (town) of the O-lu. Because of that it was called the Wei-ch'u ch'eng 威楚城. [The town is known even nowadays as Wei-ch'u. The wall was rebuilt by Kao Ming-liang 高明量 in the time of the Tuan family, during the Sung dynasty, actually in the reign of the Nan-chao King, Tuan Cheng-shun 段正淳 (1096–1108), who laid the foundation of the new Ch'u-hsiung wall two li north-west of the present town of Ch'u-hsiung]. At the end of the reign of T'ang Cheng-kuan 貞觀 (649) all the other Man (savages) became subjects of Wei-ch'u. In the 16th year of Hung-wu (1383) the viceroy petitioned the Emperor and, presenting a map, suggested that a wall be built on the present site of Ch'u-hsiung. The petition was granted and a brick wall erected seven li in circumference and 25 Chinese feet high. It collapsed frequently and was rebuilt, the last time in 1865.

487 *Seventh stage.* — From Ch'u-hsiung to Lü-ho-kai 呂合街 is a distance of 60 li. Elevation 6,500 feet.

● 133 137 Passing through the west gate and the long suburb of Ch'u-hsiung, the trail skirts the western end of the plain, crosses a camel-back bridge near the hamlet of San-chia-t'ang 三家塘 (Three-family post-station), and enters a valley with several branches, taking the right-hand branch. The hills are composed of red sandstone and red clay. Passing over low hills covered with small pine trees, we descend to another small plain which the trail skirts; several hamlets are situated at the foot-hills, the elevation being 6,350 feet. The regular lunch-stop for the caravans is the hamlet of Ta-shih-p'u 大石舖 (Great rock shop). Magnificent groves of oaks (*Quercus serrata*) grow along the road.

From this hamlet the trail meanders over rolling country and thence up a ravine past the village of Ch'ing-yüan-shao 淸源哨 (Clear spring fort), 15 li from Lü-ho-kai and Ch'ien-liang-ch'iao 錢糧橋 (Tollbridge). Here in the olden days used to be a *shao* 哨 (outpost), where two soldiers stood guard. [317] The odor of sulphur permeates the air, probably from hot sulphur springs in the neighborhood. Elevation 6,450 feet. Some distance beyond, a large stone bridge crosses the Tzu-tien Ho 紫甸河, which river has its source in Ting-yüan hsien 定遠縣 and flows into the Pai-lung Ho 白龍河.

[361] The trail ascends the spur dividing the valley of the Lung Ch'uan 龍川 from the Lü-ho-kai plain, and crossing its highest point at 6,625 feet descends steeply past an old temple to the long hamlet of Lü-ho-kai, consisting of two rows of dilapidated houses. At the western end of the hamlet is a temple with a tall wooden tower overlooking the one street; the temple is called Lü-tsu Ko 呂祖閣 (Ancestral court [pavilion] of the Lü family). Lü-ho-kai belongs to the magistracy of Ch'u-hsiung. The ancient name of Lü-ho was Ho-kuan-t'an 合關灘. Later it became the Lü-ho-i 呂合驛 (Lü-ho courier station), also known as Lü-ho 呂閤. During the time of the Nan-chao Kingdom a certain Lü Shun-yang 呂純陽 lived at this place, whence its name.

Eighth stage. — From Lü-ho-kai to Sha-ch'iao 沙橋 (Sand bridge) is a distance of 65 li. Elevation 6,900 feet.

Immediately outside the village the road leads over a bridge which spans a 487
small tributary, the Ch'ing-shui Ho 清水河 (Clear water Stream), and then
across the small plain over spurs wooded with pines and oaks, only to descend 133
again to another small plain of about 20 acres. Thence it follows along a 137
beautifully wooded ridge, the main trees being pines, oaks, and Ketteleria, to a small terraced basin and ascends a gravelly spur, on the top of which, and to east of the road, is an old fort and watch-tower called Kao-feng shao 高峯哨 (High hill fort), midway between Lü-ho-kai and Chen-nan hsien 鎮南縣 (Guarding the south prefecture) 15 li either way. From the pass the trail descends into terraced, rolling country with scattered farmhouses, the path consisting of remnants of pavement-blocks, which form a ridge in the center of quagmires.

The country becomes more open and to our left is a long plain surrounded by bare hills. On this plain is situated the walled town of Chen-nan, consisting of about 600 houses. Elevation 6,600 feet.[15]

In ancient times the place was inhabited by Man-i (savages). It was the 173
land of the P'u-lo-man 濮落蠻 (P'u and Lo tribes). At the beginning of the Yüan dynasty when the Tuan family ruled Nan-chao (1253–1382), a thousand P'u-lo-man families inhabited Ch'ien-she 欠舍 (the present district of Chen-nan). In the seventh year of Hsien Tsung 憲宗 (1257) there were established the Ch'ien-she ch'ien-hu 欠舍千戶 and the Shih-ku pai-hu 石鼓百戶. In the 21st year of Chih-yüan (1284) Ch'ien-she ch'ien-hu was changed to Chen-nan chou, subject to Wei-ch'u Lu 威楚路 (Circuit of Wei-ch'u, *i.e.* Ch'u-hsiung). In the 22nd year (1285) Shih-ku pai-hu was changed to Shih-ku hsien, subject to Chen-nan. This district city was 30 li east of Chen-nan. Prior to the T'ang dynasty there was a village in that place called Shih-ku-ts'un 石鼓村, which was made a district by King P'i-lo-ko who in 730 had united the six kingdoms (Liu chao) of Nan-chao. In the 24th year of Chih-yüan (1287) the district was abolished and became a *hsiang* 鄉, or suburban district. The *Man-shu* 蠻書 says that this is the Lü-ho (kai) of Ch'u-hsiung (*see* p. 20). The same work states further that Shih-ku-i 石鼓驛 (Courier station of Shih-ku) was once called Hua-ch'uan 化川 and was three stages from Yün-nan ch'eng (the present-day Hsiang-yün hsien or Yün-nan hsien which is not to be confused with Yün-nan fu). In the reign of T'ang Shang-yüan 上元 (760–761) the district was called Su-fu chün 俗富郡.

Passing through the west gate, which faces south of the long town we come 137
to a *p'ai-fang* (stone arch), and out into the narrow, terraced valley between 133
partly wooded hills. Outside this town I found a great number of coffins above [764]
ground awaiting burial, emitting dreadful odors, and, worse still, naked corpses
of children tied to poles and wrapped in mats, their hands and feet protruding 487
and set upright against trees, with millions of flies swarming about.

The trail leads up and down over spurs and tree-covered hills and into valleys

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[15] In ancient days Chen-nan had no wall. During the reign of Ming Hung-chih 宏治 (1488–1505) the native sub-prefect Tuan Tzu-t'ung 段梓橦 built the first tamped earth wall. In the 43rd year of the period Wan-li (1615) the chou-prefect Yin Wei-hsien 尹維憲 rebuilt a brick wall. It is three li in circumference, twenty Chinese feet high and seven thick. It has four gates with towers. There is however no moat. When the Mohammedans captured the town during the reign of T'ung-chih (1862–1874) they built a moat around it twenty feet wide and deep. This has now disappeared.

487 until we reach the village of Pan-ch'iao 板橋 (Wood bridge), 30 li from Chen-
133 nan, at the foot of a wooded hill. Leaving the village to the right it crosses a
137 stone bridge called Ling-kuang ch'iao 靈廣橋, near the temple of Ling-
kuang (Miao). Thence it leads up the valley between hills to the village of Sha-ch'iao, situated on a slope. The neighboring country is inhabited by a number of tribes, who come to the markets to dispose of their products.

Ninth stage. — From Sha-ch'iao to P'u-p'ung 普淜 (Pervading noise of the water) is a distance of 95 li. Elevation 7,450 feet.

Leaving Sha-ch'iao the trail winds about the hill-sides between wooded slopes in narrow cultivated valleys at an elevation of 6,900 feet. Here are situated farm-houses and small hamlets in groves of willows along a clear stream. The path leads up a narrow, densely wooded valley to the hamlet Ta-fo-ssu 大佛寺 (Great Buddha temple) after a temple situated in the center of the village, but nothing is left of the temple except a few posts. The hamlet consists of about five houses and is in a wretched state; elevation 7,000 feet.

[579] Climbing between steep, wooded hills, formerly the hunting-ground of the bandit chief Ch'ang Liang and his bands, who burned nearly all the villages in this region (fortunately he has been caught and executed, and the villages are gradually being rebuilt), the ravine becomes narrower and filled with a wonderful forest of Alnus, Pyrus, Quercus, *Rhododendron Delavayi*, *Rhod. Simsii*, *Rhod. scabrifolium*, *Rhod. microphyton*, *Rhod. coriaceum*, magnolias, Cornus, etc., until we emerge into a narrow pass at 7,900 feet and the little hamlet of Chü-li-p'u 苴力舖, 70 li west of Chen-nan. Every house in this once prosperous village was in ashes (1928–1930) — the act of bandits. Women and children sat among the debris in despair.

487 The trail continues up the narrowing ravine to the pass at 8,200 feet where
133 lies the hamlet called Ying-wu-kuan 英武關, or 鸚鵡關,[16] a distance of 50 li
485 from Sha-ch'iao. This is the regular lunch-stop for the caravans. The houses
are mainly food-stalls and tea-shops which cater to the traveler. A tiny temple is back of the village in a forest of oaks.

487 From this pass the trail descends, only to ascend again to a slightly higher
133 pass at 8,300 feet, whence it leads down into a red valley, bare, arid, and ex-
posed to the terrific winds which sweep it from the west. At 8,000 feet we pass
137 the wretched village of T'ien-shen-t'ang-t'ang 天神堂塘, continuing down-
stream for a short distance. Instead of following the valley we now turn to the right, and climb the steep spur over a terribly rocky trail between pine forests, to an elevation of 8,350 feet. Here the path emerges on to a flat plateau (the neighborhood is inhabited by Lo-lo tribesmen) and descends the broad mountain-side over which the wind sweeps furiously in winter and spring. Much of the land is bare and covered with fine, loose gravel and sand. Only barberry bushes (Berberis) manage to exist, with *Osteomeles Schwerinæ*, a gnarled shrub with white flowers. The hills are purplish-red and yellow with here and there calcareous outcroppings.

The trail, after having kept to an elevation of from 8,000 to 7,600 feet, de-

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[16] Not to be mistaken for the Ying-wu Shan 鸚鵡山 (Parrot Mountain), which is only a half li north-west of Chen-nan. The name is derived from the many parrots which are said to nest there.

scends into a valley enclosed by arid hills. The valley floor is planted with [243]
wheat at an elevation of 7,400 feet. Continuing in this valley we come to the
hamlet of P'u-ch'ang-ho 普昌河 (Universal Prosperity), so named after the 137
stream which divides it in two and is spanned by a bridge. This region and the 133
neighborhood of P'u-p'ung was the happy hunting-ground of the bandit chief 487
Lao Ying-hsiung 老英雄, who held sway at the time of my visit in 1928. Since then he has met the fate of most of the men who follow that dangerous profession.

From P'u-ch'ang-ho the trail once more ascends the pine-covered spurs to 7,725 feet elevation. The whole country is one vast sea of mountains. Leaving a deep valley to the left, we climb to 7,900 feet over a broad, gravelly, sandy spur, and then descend into a large valley to the hamlet of P'u-p'ung 普淜.

Tenth stage. — From P'u-p'ung to Yün-nan-i 雲南驛 is a distance of 65 li. Elevation 7,000 feet. (An *i* 驛 was a courier or dispatch station.)

From P'u-p'ung the trail climbs steeply to a flat spur at an elevation of 7,700 feet, where a lonely temple is situated dedicated to Kuan Ti (Kuan Ti Miao). The whole plateau is of sandstone and deeply eroded. Beyond the temple are a few farm-houses. The trail leads on over rolling country on the top of broad spurs of yellow sand and clay, covered with a scrub vegetation of pine, wild pears, Cornus, and a mass of Gnaphaliums. To the north are deep depressions, while the track skirts the mountain-sides near the top. The entire region is wild in the extreme, poor and unproductive. Hamlets are few, and when encountered they consist of only a few houses; cultivation being carried up the steep hill-side. Near a grove of large oaks is the hamlet of Shui-p'ang-p'u 水滂舖 (Roar of the waters), elevation 7,700 feet, on the inner slopes of the mountains, facing a depression south-west.

We continue now over a steep road to the top of another spur, elevation 7,800 feet, between scrub-oaks and Ketteleria trees. Beyond this pass is the hamlet of An-nan-kuan 安南關 (Pass of the peaceful south), a distance of 25 li from P'u-p'ung. In ancient days there used to be stationed here a *hsün-chien* 巡檢 (sub-district deputy-magistrate) who examined the travelers. This is the regular lunch-stop for caravans. From here the trail ascends to 8,000 feet along the edge of deep ravines where poplars and *Rhododendron Delavayi* grow; a splendid view is obtained of the large plain of Yün-nan-i to the west. Continuing for some li on the top of the spur, with waves upon waves of mountains to the south, we finally descend over a steep and much eroded trail, the mountains being sandstone, to this plain.

Yün-nan-i plain is about 25 li broad and over 60 li long, yet does not con- [312]
tain a single stream, or flowing water of any kind, being dependent throughout
on wells and ponds. At times these become dry and water must be carried from
great distances. Near the hamlet of Mu-p'ang-p'u 沐滂舖, at the foot of the
spur at an elevation of 6,900 feet and the first hamlet encountered on the Yün-
nan-i plain, are square ponds of bluish-grey water, the only supply of the
village. Wheat is grown but no rice. A trek of about 20 li over the level plain [243]
brings one to the lonely and dreary hamlet of Yün-nan-i (Yün-nan post sta-
tion).[17] The inns are poor and terrible, and the two temples of the village are

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[17] Yün-nan-i is east of Yün-nan hsien. Near to it is the ancient village of Ku-ch'eng-ts'un 古城村; it was on that account considered the Ku Yün-nan chün-ch'eng 古雲南郡城

137 occupied by schools and the militia. I found the houses here with gates walled-
● 133 up for fear of bandits, which fortunately are now no more. It is related that
487 the capital of Yün-nan was once at this place, but owing to the lack of water it
was transferred to the present site near the K'un-yang Lake (Tien Ch'ih 滇池).
[508] An aviation ground has been laid out east of Yün-nan-i. Neither wood nor
[374] charcoal are obtainable here, only anthracite which is burnt in open braziers,
the poisonous gases penetrating the street from the houses. The anthracite is
[316] mined near the village of Ma-kai 馬街, 15 li south of Yün-nan-i.

Eleventh stage. — From Yün-nan-i to Hung-ngai 紅崖 is a distance of 85 li. Elevation 6,120 feet.

From Yün-nan-i the trail leads along the plain, past a quaint pond near a temple with the houses of the long village of Kao-kuan-p'o 高關坡, opposite, then along the foot-hills for 15 li, which bring us to another small plain which the trail crosses. From about the center of this plain, called Hsiang-yün-pa
祥雲壩 (Auspicious cloud plain; in Yün-nan a *pa-tzu* 壩子 is a plain), another
[241] trail leads south-west to Meng-hua 蒙化, two stages (120 li) distant. Wheat
and broad beans were cultivated on this plain. To the right, or north, is a lake of considerable size called Ch'ing-hai-yün 青海雲.[18] A rocky spur closes the plain, where is situated the small hamlet of Shai-chin-p'o 晒金坡.

The track now leads across the rocky spur to the shores of the lake. We find ourselves on another plain which we cross, thence over some foot-hills into
a larger plain to the north. Passing through the forlorn hamlet of Kou-ts'un-p'u
[137] 溝村舖, elevation 6,900 feet, with its hedges of *Opuntia monacantha* cactus,
we come out into grassy country, the hills being absolutely bare and lonely in the extreme, reminding one of the grasslands of north-east Tibet. To the north there is, however, a cultivated plain, while to the south are the denuded hills. Ahead red cliffs are visible, at the foot of which is a fairly imposing Buddhist temple, and next to it the hamlet of Ch'ing-hua-tung 青華洞 (Azure flowery cave), named after a large limestone cave a short way from the temple.[19] The distance from Yün-nan-i is 40 li and it is a regular lunch-stop, although a poorer place it is difficult to imagine; it consists of about four dilapidated houses or, rather, ruins. The cave, about 120 feet wide, extends some distance
into the mountain, the ceiling is very high and there are several side branches.
[764] I followed the main cave for some distance but as the air became foul, and we
stumbled on old coffins and human skeletons, we returned, glad to see daylight again. Two li north of Ch'ing-hua-tung is the magistracy of Yün-nan hsien, also called Hsiang-yün hsien 祥雲縣.

From Ch'ing-hua-tung the trail leads directly up the mountain and thence into a ravine surrounded by bare hills, wheat being planted in its narrow floor. Within the ravine, some distance up, the trail leads through the village of I-chiang-p'u 倚江舖, elevation 7,100 feet; the whole village is occupied with

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(Ancient Yün-nan prefectural city). Nine li south of Yün-nan hsien is the village of Li-ssu-ying 力士營. Tradition relates that it was the camp (*ying*) of the army of Chu-ko Wu-hou 諸葛武侯 (Marquis Chu-ko Liang) (181–234).

[18] Also called Yeh-ching Hu 葉鏡湖. In the center of the lake is a rock resembling a mirror (*ching*), — hence the name.

[19] Ch'ing-hua Shan is the name of the mountain in which the cave is situated.

making straw sandals for coolies and travelers. The motor-road also passes 137 by this village. From there the trail continues up to a pass at 7,300 feet and thence over hill-sides covered with *Heteropogon contortus*, a brownish grass, 133 and — sparingly — with pines. 487 In the distance looms up a blue mountain range called K'un-mi Shan 昆彌山, extending in a north and south direction and separating the Hung-ngai plain from Hsia-kuan and Ta-li.

The trail ascends once more to 6,900 feet, and then leads down to the village of Chia-mai-p'u 加買舖, only to climb up again over bare hills and then descends to the plain of Hung-ngai 紅崖 (Red cliff), formerly called Pai-ngai 白崖. The name Pai-ngai was changed to Hung-ngai in the 21st year of Ch'ien-lung (1756).[20]

Hung-ngai is a long, forlorn-looking, straggling affair, with a temple at either end. The inns were and are execrable. This is due to the enormous hordes of soldiers which passed through this, as well as all the other hamlets. For years the road was next to closed on account of the bandits who harassed the region.

The earthquake which wrecked Ta-li in the spring of 1925 also played havoc 731 with Hung-ngai. In the large temple at the eastern entrance to the village 137

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[20] Pai-ngai was the ancient Ts'ai-yün ch'eng 彩雲城 and was also called Wen-an-tung 133 ch'eng 文案洞城. Afterwards it was called Pai-ngai ch'eng. In the T'ang dynasty, during 487 the reign of the Meng family 蒙氏 (649–902), it was called Pai-ngai chien 睒 and was one of the ten *chien* (States), the words *chien* and *chao* 詔 being synonymous (*see* p. 18, note 12).

The *Yün-nan T'ung-chih* (ed. 1736), ch. 26, fol. 16a, states that the ancient Pai-ngai ch'eng was 60 li east of Chao chou 趙州 and that its ancient name was Pai-ngai tien 甸. But this statement cannot be correct, for Hung-ngai, the ancient Pai-ngai, is 60 li south-south-east of Chao chou. It is correct when it says that the ancient Ts'ai-yün ch'eng was west of Pai-ngai at the foot of the K'un-mi Shan. A pass (Ting-hsi ling 定西嶺) leads over to Chao chou. The distance from Hung-ngai to the foot of K'un-mi Shan is less than ten li, so Ts'ai-yün ch'eng and Pai-ngai must have been close together and later have become one town.

The name Pai-ngai was derived from a cliff, white as snow, in the western hills. When, in the third year of Chien-hsing 建興 of the Minor Han 蜀漢 (225), Chu k'o Liang attacked Yün-nan, his soldiers camped at Pai-ngai. During the reign of Ming Chia-ching (1522–1566), a Tu-pu T'ung-p'an 督捕通判, (Police superintendent and sub-prefect), from Ta-li, dwelt there and built an earth wall which ceased to exist at the end of Wan-li (1619). The foundation of the wall was still visible in 1736.

The king of Pai Kuo 白國, Lung-yu-na 龍佑那, built Ts'ai-yün ch'eng. He had seen brilliant, variegated clouds, hence he gave the city its name.

History relates that in the 10th year of Cheng-yüan 貞元 (794), I-mou-hsün 異牟尋 fought the T'u-fan (Tibetans), at the Iron Bridge (*see* p. 57); he also attacked the Shih-man 施蠻 and Shun-man 順蠻. (The word *man* at that time was substituted for the word *chao* 詔. Shih-man was the former Shih-lang chao 施浪詔, and Shun-man was the former Lang-k'ung chao 浪穹詔 of the five *chao* which later were absorbed into the Nan-chao Kingdom.) The Shih-man were also a tribe and originally belonged to the Wu-man (Black savages). They dwelt north-west of the Iron Bridge. The Shun-man also belonged to the Wu-man and dwelt in the same region as the Shih-man. I-mou-hsün captured Hsün-lo 尋羅, king of the Shih-man, and placed him and his kindred in Meng-she ch'eng 蒙舍城. He also captured the king of the Shun-man, whose name was P'ang-mi-ch'ien 傍彌潛, and placed him with his kindred in Yün-nan Pai-ngai 雲南白崖. The *Erh-yüan hsien chih* (*Lang-k'ung hsien chih lüeh*), ch. 3, fol. 2a, says that during the period of T'ang Cheng-yüan 貞元 (785–804) Nan-chao attacked Chien-lang 劍浪 (Chien-ch'uan), took Lang-k'ung, Shih-lang and Teng-t'an (Teng-ch'uan), united the three *lang* and created Lang-k'ung chou.

Seven li south-east of Pai-ngai, there was established the secondary (military) transport station of 1,000 families 白崖千戶所, in the 12th year of Sung Shun-yu 宋淳祐 (1252).

2: Rock K-5 (1934-) 1947 AF16 Southwest China AF16

487 731 ●133 137 [508] the great mud idols were all knocked off their feet, and were leaning against the wall, their legs from above the ankles resting on the floor. The village is at the western end of the plain, which is 30 li in length. A stream called Ch'ih-shui Ho 赤水河, (Red water Stream) crosses the center of the Hung-ngai plain from north to south; 30 li down the valley to the south is the town of Mi-tu 彌渡 where there is an aviation ground. Although the plain is very fertile, next to nothing could be bought in the way of vegetables.

487 133 137 *Twelfth stage.* — From Hung-ngai to Fei-lai Ssu 飛來寺 via Chao chou 趙州 (Chao chou is now called Feng-i hsien 鳳儀縣). The distance to Fei-lai Ssu is 65 li. Elevation 6,900 feet.

From the Hung-ngai plain the trail ascends a deep ravine which seemed to have cleft the mighty range hemming in the plain on the west. The climb is a steep one over a bad road, between bare hills and slopes, to an elevation of 7,200 feet, or 1,100 feet in 15 li. To describe the rocky stairway which leads to the pass at the top of the ravine is an impossibility.

The pass, a little below which is situated a temple called Yün-t'ao Ssu 雲濤寺, is over the summit called Ting-hsi ling 定西嶺, which name is engraved in large characters on a memorial stone in front of the steep temple-steps. The stone bears the date 14th year of Ming Hung-wu (1381). The entrance to the temple is a tea-shop. It is an excellent lunch-stop when coming from the west, but not when coming from Hung-ngai. From the pass a trail leads to the left to Meng hua 蒙化, south of Hsia-kuan 下關 and Ta-li. This used to be a famous brigand haunt, but to-day they have disappeared, and now the motor-road is opened and they are a memory only. The name Ting-hsi ling was given to the pass and peak by Mu Ying 沐英,[21] marquis of Hsi-p'ing 西平侯, in the beginning of the Ming dynasty. Its ancient name was K'un-mi ling 昆彌嶺. From this pass the trail descends, as gradually and gently as it ascended steeply on the other side, into another deep ravine with the left or western slopes densely wooded, but with only pines covering the eastern slopes.[22]

[731] We pass various hamlets, such as Hsiao-shao 小哨 and Ta-shao 大哨, partly destroyed by the earthquake of 1925. Elevation 7,100 feet. From here on the valley broadens, and the hills are bare. The trail descends to the edge of the valley along rice-fields, and emerges on the plain on which Chao chou (Feng-i hsien) lies at an elevation of 6,900 feet. Chao chou is a walled city

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[21] Mu Ying was a native of An-hui. He was appointed Governor of Yün-nan in 1384. His sons also held this office in succession. He died in 1392. In 1388 he gained a great victory over the Burmese, so that in 1389 Burma acknowledged the suzerainty of China (GILES). When he attacked Yün-nan it was as Fu-tsung-ping 副總兵 (Assistant Brigadier-General), with Lan Yü 藍玉, marquis of Yung-ch'ang 永昌, who held the same rank. Both served under General Fu Yu-te 傅友德 who was in command of the southern expedition. This was in the 14th year of Ming Hung wu (1381).

[22] Another peaceful lunch-stop away from mules and shouting muleteers is the Buddhist temple of T'ai-kuo Ssu 泰國寺 (Exalted nation Temple), built at the foot of a mountain wall called Ling-an Shan 靈安山 (Mountain of spiritual peace). It was built in the third year of Hung-wu (1370) according to the priest who had resided for 33 years in the temple. The *Chao chou chih* 趙州志, ch. 3, fol. 52, states that it was built during the reign of Ming Ts'ung-cheng 明崇禎 (1628–1643).

of about 600 houses, but quite forlorn and empty.[23] The plain is wide but is 487
hemmed in on the north by a broad, conical hill, partly wooded. Five li be- 133
yond Feng-i (Chao chou) we come to the hamlet of Shih-pi-t'ou 石壁頭 and
the peaceful temple at the foot of the cliff, called Fei-lai Ssu,[24] which is the 137
regular caravan halting-place, as there are no inns with stables in Chao chou.

Thirteenth stage. — From Fei-lai Ssu to Hsia-kuan 下關 (Lower pass) and Ta-li 大理 is a distance of 25 and 50 li respectively (55 li from Chao chou).

Near the end of the plain, at the foot of a wooded conical hill, the trail makes a complete right angle to the west, and one is fronted by the magnificent Tien-ts'ang Shan 點蒼山 (Starred azure Mountain), commonly called Ts'ang Shan,[25] snow-streaked half-way down its slopes; its height is 14,000 feet. We

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[23] In ancient days Chao chou had no wall. The first earth wall was built in the second year of Ming Hung-chih (1480). It was 3 li in circumference, 13 feet high, and 5 feet thick. Several times at various periods the wall collapsed and was last rebuilt in 1805. Prior to the Han dynasty, Chao chou was in the State of K'un-mi 昆彌. During the Han dynasty (B.C. 206–24 A.D.), it belonged to Yün-nan hsien. K'un-mi was the name of a family who ruled over that State — hence K'un-mi Kuo — but nothing is known regarding their succession. Afterwards the Lo-lo man 羅落蠻 dwelt there. In the T'ang dynasty it was the land of K'un chou 昆州. Subsequently it was called Chao chou chien 趙州瞼. Later it was called Chao chün 趙郡 and Chao chou. In the time of the Tuan family it was called T'ien-shui chün 天水郡. In the beginning of the Yüan dynasty it was the Chao chien ch'ien-hu 趙瞼千戶. During Yüan Chih-yüan (1264–1294) it was called Chao chou subject to the circuit of Ta-li. In the Ming dynasty the name remained unchanged. When Kublai Khan attacked Ta-li, Chao chou was first captured; and when the Ming troops attacked the region they first took Chao chou and then the two strategic forts, the Hsia and Shang Kuan. The district derived its name from a certain Chao K'ang 趙康 who was sent to reside there by the Meng family of the Nan-chao Kingdom.

[24] The temple received its name from a legend which relates that an image of a Buddha came flying through the air. It is situated at the foot of Yü-lung Shan 浴龍山 (Mountain of the bathing dragon), also known as Su-lung Shan 宿龍山 (Resting dragon Mountain), and is five li north of Chao chou. Another temple called T'u-chu Miao 土主廟 (Temple of the local lord) is in the same village. It was rebuilt during the period Cheng-t'ung 正統 (1436–1449).

[25] The Ts'ang Shan is also called Ling-chiu Shan 靈鷲山, named so after a peak in India called Gṛdhrakūta on which vultures had their nests: literally, "Vulture Peak." The Indian mountain, which is now called Giddore, is near Rājagṛha, famous for its vultures and caverns inhabited by ascetics, where Piśuna, or Māra, in the shape of a vulture, hindered the meditation of Ananda (EITEL). It has 19 peaks, and 18 streams descend from it. In the first year of the period Hsing-yüan 興元 (784), of T'ang Te Tsung 德宗, I-mou-hsün of the Meng family, who was ruler of Ta-li, conferred upon it the title of Chung-yo 中嶽 (Central sacred Mountain). During the reign of Hung-wu, Lan Yü 藍玉, second commander of the left wing of the army and marquis of Yung-ch'ang, attacked Ta-li. He sent his soldiers west of the Ts'ang Shan and ordered them to climb it from the west and implant his flag on the highest peak. When the people of Ta-li saw the flag they fled. The *Ta-li fu chih*, ch. 5, fol. 1b, states that it is 3 li west of the city and that it extends for over 100 li from north to south, like a wall. The *Han Shu* calls it the Hsieh-lung Yün-nan Shan 邪龍雲南山 and compares it to the T'ai-i Shan 太乙山 of Fu-feng 扶風, Shensi. Clouds often encircle the mountain like a jade girdle, hence people speak of it as the Jade girdle (mountain). Each of its nineteen peaks has a special name, for all are different. Enumerated from south to north beginning with the one above Hsia-kuan and adjoining the T'ien-sheng ch'iao, they are: K'o-yang 斜陽, Ma-erh 馬耳 Horse ear, Fo-t'ou 佛頭 or Buddha head, Sheng-ying 聖應, Ma-lung 馬龍 or Horse dragon, Yü-chü 玉局, the Lung-ch'üan 龍泉 or Dragon spring, and the Central Peak or Chung-ho feng 中和峯. Then follow the Kuan-yin 觀音, or Goddess of

[p.28 A]

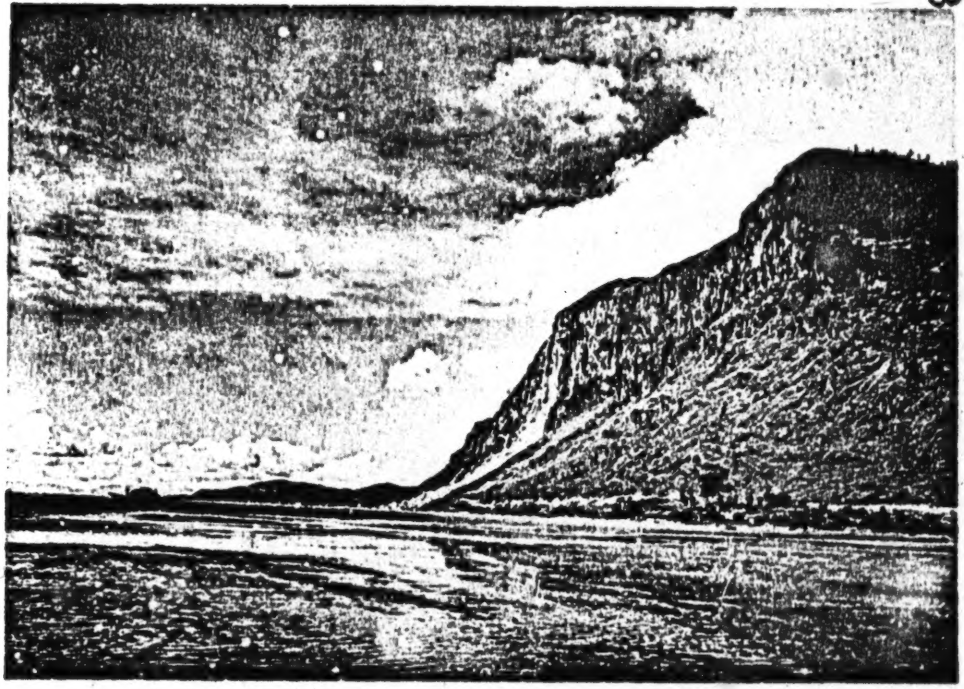

PLATE 1.—THE NORTHERN END OF TIEN CH'IH, THE YÜN-NAN LAKE

滇池北端

This part of the lake is commonly known as Ts'ao Hai 草海 or Grass Lake. It also goes by the name of K'un-ming Ch'ih 昆明池 or K'un-ming Lake. Bordering the lake to the west is the famous Lo-han Shan 羅漢山 popularly called Hsi Shan 西山.

487 pass through miserable hamlets nearly destroyed by the earthquake, and over
133 a sandy trail which skirts the hill-sides, leaving to our right the southern end
● 137 of the Erh Hai 洱海 (Erh Lake), that is, the Ta-li Lake (PLATE 4). On Davies' *Map of Yün-nan* the distance to Hsia-kuan does not appear to be more than 15 li, in comparison to the stretch from Hsia-kuan to Ta-li; the scale is quite out of proportion. The actual distance from Chao chou to Hsia-kuan is 30 li, and from there to Ta-li 25 li.

Hsia-kuan is situated on a hill-side and is visible from afar; elevation 6,900 feet. It is the business town of western central Yün-nan, while Ta-li is the residential town and the seat of the officials. The Hsia Kuan has another name — the Lung-wei Kuan 龍尾關 (Dragon-tail Pass). This, as well as the Shang Kuan 上關 (Upper pass, also called Lung-shou Kuan 龍首關, Dragon-head Pass) were constructed by P'i-lo-ko 皮羅閣 in the 29th year of K'ai-yüan 開元 (741). He was the first ruler or King of Nan-chao and the fourth of the Ta Meng or the Great Meng dynasty. The first kingdom of the Ta Meng was called the Meng-she chao 蒙舍詔.

Passing through the walled town with its narrow streets, we cross the Hei-lung ch'iao 黑龍橋 (Black dragon bridge), over the Hsia-kuan Ho (Hsia-kuan River),[26] the outlet of the Erh Lake,[27] and ascend the steep grade over the slippery pavement of the suburbs of Hsia-kuan.

Mercy Peak, the Ying-lo 應樂, the Hsüeh-jen 雪人 or Snow-man Peak, the Lan-feng 蘭峯 or Orchid Peak, the San-yang 三陽, the Ho-yün 鶴雲, the Pai-yün 白雲, or White cloud, the Lien-hua 蓮花 or Lotus Peak, the Wu-t'ai 五臺 or Five Terraces, the Ts'ang-lang 滄浪 and last the Yün-lung 雲弄, directly above the Shang-kuan.

[26] The Hsia-kuan Ho, where it enters the defile in the Tien-ts'ang Range, is called the Ch'ing-shui Ho 清水河 (Clear water Stream); beyond it is called the Ho-chiang Ho 合江河, after a village by that name in the gorge. It flows as the Ho-chiang Ho into the Yang-pi River 漾濞江.

[27] The Ta-li Lake, which is 90 li long and from 9 to 21 li wide, is a beautiful sheet of water. To the east it is bordered by reddish, bare, rather low hills, the region being called Tung-hai 東海 (East lake). The lake is also called the Hsi-erh Ho 西洱河 (West Erh Stream), and is east of T'ai-ho hsien 太和縣, the present Ta-li hsien or Ta-li district. It is also known as the Yeh-yü Shui 葉榆水 (Waters of Yeh-yü) — Yeh-yü being the ancient name of Ta-li. [The Yeh-yü of the Han epoch is 10 li south-east of the present-day Ta-li and is identical with the village of Yang-ho-p'u 陽和鋪, where its foundations, or remnants, are still visible. The region now belongs to the district of T'ai ho hsien. During the Han dynasty it was subject to Yün-nan hsien 雲南縣, now called Hsiang-yün hsien 祥雲縣, pronounced in Yün-nan, Ch'ien-yün hsien.] The origin of the name Yeh-yü is traced to a large forest of elms, called *yü-shu* 榆樹 in Chinese. [*Ulmus pumila var. pilosa* Rehd. is quite common on the eastern slopes of the Tien-ts'ang Shan.] The elm forest existed in ancient days at the outlet of the Ta-li Lake at Hsia-kuan, by the T'ien-sheng ch'iao 天生橋 (Natural bridge), a natural stone bridge which spans the outlet of the lake. It was so dense that it was always dark and no one could pass there. To the south of the bridge is a stele which records that it was there that Chu-ko Liang captured Meng-huo 孟獲. The stele is dated Kuang-hsü *ping-wu* 丙午 (1906).

Still other names for the Ta-li Lake are Hsi-erh Hai 西洱海 and Erh Shui 洱水.

The source of the lake is in the Pa-ku Shan 罷谷山 in the north of Lang-k'ung hsien 浪穹縣. Flowing south it passes east of Lang-k'ung hsien and Teng-ch'uan chou 鄧川州 and thence enters the borders of T'ai-ho hsien, where it is called Hsi-erh Ho. From the Tien-ts'ang Shan, which lies to the west, 18 affluents descend into the stream, which thus enlarged forms the Erh Hai. Its outlet is at Hsia-kuan as has already been described.

The shape of the lake is that of a human ear, *erh* 耳, hence the name Erh Hai. Its cir-

[p.28 B]

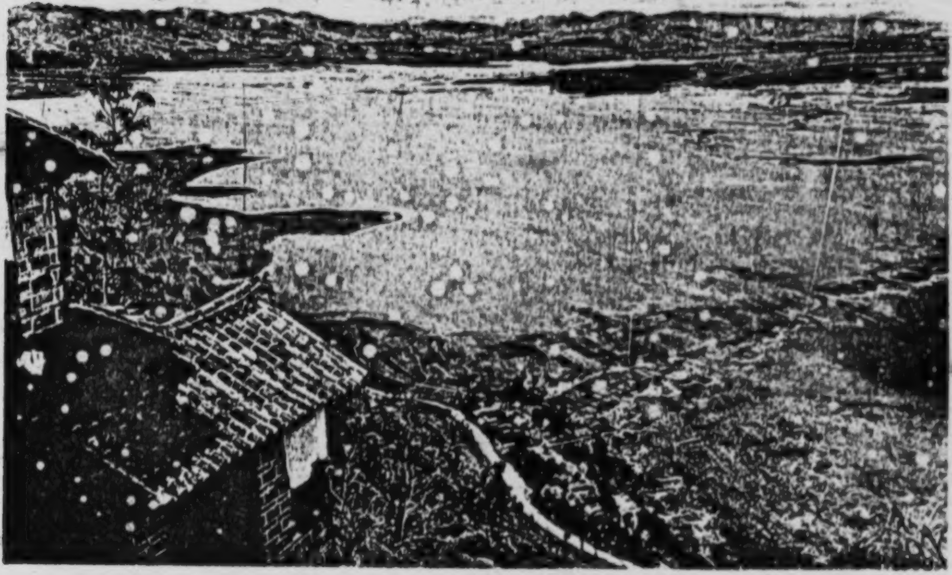

Plate 2.—Tien Ch'ih Seen from Hsi Shan

自 西 山 觀 滇 池

Looking east from Lo-han Ssu 羅漢寺 the main temple on Hsi Shan 西山 across the northern end of the Tien Ch'ih; K'un-ming is in the extreme upper right. The division of the actual Tien or K'un-ming Ch'ih and the Ts'ao Hai or Grass Lake can be seen in the lower right. The lake is at an elevation of 6,400 feet.

[764] 137 ● 133 487 Beyond, the country road is paved and slippery and passes through wheat-fields with thousands of graves to the west up the hill-sides, that is the foot-hills or slopes of the Ts'ang Shan. Traffic is heavy on this road, especially in the month of April when the annual fair is in progress. The hills are bare and brown, the lower slopes, as already remarked, being covered with graves. Here is also a thirteen-storey pagoda, the apex of which is in ruins.[28]

[291] Sails are visible on the lake and boats crossing the placid waters to the district of Tung-hai 東海, East lake [the district is actually east of the lake]. Hundreds of people were on the road, the men all wearing low, broad-brimmed hats covered with a sky-blue oil-cloth, and long streamers of the same color knotted in front over the chest or hanging loose down to the knees. Straw-hat sellers were to be seen; the hats are made from rushes, most of them plain, others ornamented with gaudily colored straw, pink, blue, and yellow.

Fifteen li bring us to the temple of Kuan-yin Ssu 觀音寺 (Goddess of Mercy Temple)[29] (PLATE 5).[1] In front of it kitchens and restaurants were doing a roaring business, for it was at the time of the fair when, in 1922, I made my first visit to Ta-li, coming overland from Siam via Chieng-mai, Keng-tung, Chiu-lung-chiang 九龍江, Ssu-mao 思茅, Ching-tung 景東 and Meng-hua 蒙化. The village near the temple is called Yang-ho-p'u 陽和舖.

173 Tradition relates that when the soldiers of Han arrived at the frontier, the Kuan-yin Ta-ssu 觀音大士[30] changed herself into an old woman and carried a large rock by means of a rope made of rice-straw. When she saw the soldiers she spat at them. The soldiers remarked that if the old women of the country could perform such work what must be the strength of the young; and this was sufficient to put fear into the camp. The Kuan-yin's rock is now in the court of the temple in the center of a pool containing gold-fish, and with a shrine over it. The old temple was destroyed during the Mohammedan Rebellion (1855–1873) but was rebuilt afterwards. Volumes could be written

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cumference is over 300 li. There are three islands in the lake, the southern being called Yü-chi tao 玉几島 (Jade table island), the central one Ch'ih-wen tao 赤文島, and the northern one Chin-so tao 金梭島 (Golden shuttle [weaver] island).

[28] This pagoda is called I-T'a Ssu 一塔寺 (Single pagoda). It is also known as Hung-sheng Ssu 宏聖寺 and is situated south-west of the city of Ta-li. It is over 100 feet in height and is said to have been built by A-yü Wang (King Aśoka of India). This has also given the pagoda the name of A-yü Wang t'a 阿育王塔 (Pagoda of King Aśoka). It is hardly possible, however, that Aśoka should have built it. The *I-t'ung chih* of Chia-ch'ing 嘉慶一統志 (Chinese Geography) records that it was built during the time of the Sui Emperor Wen Ti 文帝 (581–604). The pagoda stands below the seventh peak of the Ts'ang-Shan range.

[29] The real name of the temple, which is written on a board over the entrance, is Ta-shih An 大石庵 (Great rock Shrine). It is also commonly called Kuan-yin-t'ang 觀音塘 and Shih-li-t'ang 十里塘 (Ten-li post-station), as the distance from Ta-li to this temple is commonly reckoned as 10 li.

It is not known when the temple was first built, but the dates of its restoration or rebuilding are extant. It was first rebuilt in 1807; in the reign of Hsien-feng (1851–1861) soldiers destroyed it by setting fire to it. In the second year of Kuang-hsü (1876), the Ta-li Governor, Yang Yü-k'o 楊玉科, rebuilt it. Yang was a native of the district of Li-chiang, having been born in the salt-well village of La-chi-ming 喇雞鳴. His ancestors hailed from Ching chou 靖州 in Hu-nan 湖南.

[30] The word Ta-ssu stands here for the Sanskrit term Mahāsattva (perfected Bodhisattva, greater [*mahā*] than any being [*sattva*] except Buddhas).

[1] [See p. 28 E-- Analyst]

344 been built barracks for the regular troops stationed at Ta-li. The San-t'a Ssu 三塔寺 (PLATE 6)[1] are also called Ts'ung-sheng Ssu 崇聖寺 and near them is the grave of the P'ing-chang 平章 (Minister of State) Tuan Kung 段功, a member of the ruling house of Tuan under the Yüan dynasty. He died in 1366.

As has already been remarked, Ta-li (the name is said to be of Tai or Siamese origin, *i.e.*, T'a-lé = lake)[34] is of great historic interest, but does not come
508 within the scope of this work. An aviation ground has been laid out between Ta-li and the lake.

487 *Fourteenth stage.* — From Ta-li to Teng-ch'uan 鄧川[35] is a distance of 90 li.
133 Elevation 7,100 feet.

137 The trail leads across sandy and rocky stream-beds, which descend from the Ts'ang Shan Range, and over ditches and brooks. In the distance is a long, narrow spur extending from the Ts'ang Shan towards the lake: this is the Shang Kuan 上關 (Upper Pass).

We pass a small hamlet which has escaped both earthquake and bandits, and now follow close to the foot-hills as far as the village of Chou-ch'eng 周城, 50 li from Ta-li. Many large *Ficus stipulata* trees, their trunks surrounded by stone enclosures for people to rest their burdens on, are met with along the road.

487 From the last village, which is a lunch-stop, it is 20 li to the village of Shang-
133 kuan (also called Dragon-head). The elevation is 7,100 feet. The poor, mis-
579 erable hamlet is in absolute ruins, having been burnt and looted by the bandit chief, Chang Chieh-pa 張結疤 (Chang the Stammerer). A sordid scene unfolds as one enters the gates of this former stronghold. No inn was available, not a single house intact, and at the time of writing — 1934 — nothing had been reconstructed. The village of Sha-p'ing 沙坪, only two li beyond, shared the same fate as Shang-kuan, and the large schoolhouse, which once served me as shelter, existed no more.

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[34] PROFESSOR GEORGE COEDES, Director of the Ecole Française d'Extrême-Orient, Hanoi, in answer to an inquiry regarding the possible Siamese origin of the name Ta-li, writes: "The Siamese word for 'lake' is *da-lé*, pronounced *t'a-lé*, but it is most probably a loan-word from Khmer *danlé* pronounced *tonlé* (Tonlé Sap, Cambodia's Great lake). The use of Cambodian loan-words is usually restricted to South Siam, and I do not think that *da lé* or *t'a lé* exists in any Northern T'ai dialect. The etymology of Ta-li from *da lé* appears to me as extremely doubtful."

As to the origin of the name Ta-li, the *Ta-li hsien-chih kao*, ch. 3, fol. 5a–5b, states that in the T'ang dynasty the Meng family absorbed the other five kingdoms, that is, they united the Liu chao 六詔 (Six kingdoms). In the second year of the period Hsing-yüan 興元, in the reign of T'ang Te Tsung (785) (this should read first year of the period Cheng-yüan 貞元, as there was no second year of Hsing-yüan) the grand-child of Ko-lo-feng, I-mou-hsün, called himself the Jih-tung Wang 日東王 (King of the Orient) and took as his dynastic title Ta Li 大禮. It was not until the second year of the period T'ien-fu 天福 of Emperor Kao Tsu 高祖 of the Later Chin dynasty 後晉 (937) that Tuan Ssu-p'ing 段思平 established the dynastic title Ta Li 大理. The *Li-chiang fu chih lüeh*, ch. 上, fol. 14b, and the *Nan-chao Yeh-shih*, however, state that it was I-mou-hsün who first established the name Ta-li, or Ta Li 大理, as his dynastic title in the first year of Hsing-yüan 興元 (784). Ta Li 大禮 means "great decorum" or "great propriety," while Ta Li 大理 means "great principle." As can be seen, there is therefore some discrepancy in establishing the date, etc., of the name Ta Li 大理.

[35] The ancient name of Teng-ch'uan was written T'eng-ch'uan 邆川.

[1] [see p.28 F.-- Analyst]

Beyond Sha-p'ing, at the end of the lake,[36] the trail climbs the rocky spur 487
among old graves, skirts the red hill-sides above the marshy plain to the east, 133
thence through a lovely wood and out onto the eroded, red, rocky hills. High
ranges enclose us on both sides. We descend to the walled town of Teng- 137
ch'uan,[37] crossing by a bridge over a small stream called the Ch'i Shui 溪水 which forms the moat of the city, and flows past the south gate. A long street descends into this forlorn place, which dips northward. There are no inns for caravans, but a large school-house, or former Confucian temple (Wen Miao 文廟), gave us shelter. The temple, situated in spacious grounds, is in fairly good repair. An agricultural station and the yamen of the magistrate adjoin it.
The plain is very fertile and the wheat-fields were the best so far encountered. [243]
Buckwheat is also grown.

Fifteenth stage. — From Teng-ch'uan to Niu-kai 牛街 is a distance of 90 li. Elevation 7,500 feet.

From the town we descend to the plain, where we met hundreds of Min-chia peasants carrying local produce to market, such as cereals, rice, pears, mats, reeds, wine in earthen jars, hides, vegetables, etc., and in such quantities that I was astonished and wondered who would buy all these things. It was an endless procession, for it was market-day in Teng-ch'uan. The trail leads between fields and through a large marsh with tall rushes growing in it which are used in making mats and the Ta-li hats.

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[36] At the north end, 15 li south of Teng-ch'uan near Sha-p'ing, there is a marshy pond separate from the Ta-li Lake, though its waters drain into it. It is called Shang Erh Ch'ih 上洱池 (Upper Erh Ch'ih).

[37] In the Han dynasty, Teng-ch'uan was in the territory of I-chou Chün, in the prefecture of Yeh-yü 葉榆. In the beginning of the T'ang dynasty it was the T'eng-pei chou 邆備州, dependent on Yao chou 姚州, the seat of the Tu-tu 都督 (military governor). Afterwards it became the T'eng-t'an chao 邆賧詔 by conquest. It was united with Nan-chao and the latter established the *t'an* 賧 of Teng-ch'uan 鄧川. Afterwards it was changed to the city of Te-yüan or Te-yüan ch'eng 德源城.

In the beginning of the Yüan dynasty there was established the Sub-military station of 1,000 families of Te-yüan.

In the 11th year of Chih-yüan 至元 (1274) the name was changed to Teng-ch'uan chou 鄧川州, dependent on Ta-li. This name was retained in the Ming dynasty. To-day it is called Teng-ch'uan hsien.

In the third year of Lung-ch'ing 隆慶 (1569) the T'u-chih-chou 土知州 (native prefect) A 阿 was done away with and a transferable official appointed, under whom were registered or enrolled the families of 12 li (communes), and who controlled one hsien. (From *Tu-shih Fang-yü-chi-yao* 讀史方輿紀要, ch. 117, p. 8b.)

In ancient days Teng-ch'uan had no wall. The first was built, of tamped earth, by magistrate Chou Wen-hua 周文化 in the third year of Lung-ch'ing (1569).

Later it sank in the sand and water and the city was without a wall; it was not rebuilt until the 14th year of Ts'ung-cheng (1641). It had three gates — in the east, south, and north respectively. It was rebuilt several times, but in 1762 it was replaced by a brick wall which was then three and seven-tenths li in circumference and had four gates.

The town is most peculiarly situated on a steep slope, with the Ch'i Shui 溪水 flowing past the highest part of the town just outside the south gate, which has a small stone bridge in front of it. This stream which encircles the city debouches into the Lo-shih Chiang 羅時江 to the north. One steps from the bridge down into the gate and on down the long, steep street which leads through the town. In summer Teng-ch'uan is said to be frequently inundated with flood water. A common saying is that the magistrate who built the wall was

487 Twenty li of level going, after passing the village called Yu-so 右所, bring
133 us to another small hamlet at the foot of the embankment of the canal[38]
137 which carries the waters of the Lang-k'ung Ho 浪穹河 [here the stream is called the Mi-chü Ho 瀰苴河] into the Ta-li Lake. This is the hamlet of Chung-so 中所 where we cross a bridge[39] over the canal to the eastern embankment. Elevation 7,000 feet. The slopes of the canal banks are wooded mainly with Albizzia trees, Rhus, Zizyphus, etc., giving welcome shade to the traveler.
[317] Here we met with large salt caravans with their dirty, grey, cylindrical blocks of salt,[40] also many tribespeople carrying loads of firewood by means of yokes around their necks. The yokes in turn are fastened to straw bands borne over the forehead (PLATES 7 and 8).

As the trail nears the Lang-k'ung gorge, the stream is bounded only on the east by the embankment, the mountains to the west forming its other bank. Here the path enters a deep ravine, bare of trees, except for some *Opuntia* cacti which grow among the black boulders and line the trail or road — for this part of the highway has been improved and graded, and can almost be called a road. The old trail, which led purposelessly up and down over the hill-side, had been abandoned since my first visit in the spring of 1922. Half-way up the gorge we come to a bridge, elevation 7,225 feet, over the roaring torrent known in ancient days as Hsi-erh Ho.[41] On the other side of the gorge a trail leads to the hsien city of Lang-k'ung,[42] formerly known as Erh-yüan 洱源; from there it is 100 li north to Chien-ch'uan, and 45 li south to Teng-ch'uan.

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executed with his entire family and relations by order of the Emperor, so that there remained no descendants.

[38] This canal is called by the Na-khi, Bu-ndo-lo-gko (Hind part of a pig). *Lo-gko* means "inside."

[39] This bridge is called Te-yüan ch'iao 德源橋, and was built by Wang Kan 王綱, a native of Teng-ch'uan, during the reign of Ming Ying Tsung, period T'ien-shun 天順 (1457–1464).

[40] The salt comes from the salt-well of Ch'iao-hou ching 喬后井, situated on the east bank of the Pai-shih Chiang 白石江, which is really the Yang-pi 漾濞, the Chinese calling the upper part of that river the Pai-shih Chiang. The Chinese military map of Yün-nan, printed in the seventh year of the Republic (1918), gives three names for the river: the Kung Chiang 工江, Pai-shih Chiang 白石江, and Yang-pi 漾濞. The strangest thing about this map, however, is that the northern part of the Yang-pi, or Kung Chiang, flows into the Mekong near a place called Hsiao-tien 小甸; the central portion, or Pai-shih Chiang, flows west of the Ts'ang Shan; and the lower part, called the Yang-pi, according to the same map, flows again into the Mekong, this time north of the town marked Yün chou 雲州! This error has, however, been corrected in a later edition published in 1928. The Yang-pi has its source at the head of the valley, 50 li south of Shih-ku 石鼓, flows by Chien-ch'uan 劍川, where it receives the outlet of the lake, and then straight south, and west of the Ts'ang Shan range, into the Mekong. No large river enters the Mekong below Wei-hsi. It is impossible to say what the Kung Chiang is, and where it enters the Mekong.

[41] This river has its source 20 li north of Lang-k'ung in the mountain called Pa-ku Shan 罷谷山; it is the present-day Lang-k'ung River. Chinese geographies say that it flows east of Ta-li and then joins the Yang-pi Ho. They consider Ta-li Lake, into which the river flows at Teng-ch'uan, as a continuation of the river, and the Hsia-kuan Ho, the exit of the Lake, as the same river.

[42] During the Han dynasty Lang-k'ung belonged to the land of Yeh-yü (the present Ta-li region).

Our trail keeps to the east slope of the gorge and ascends to the end of the 489
ravine, or rather its beginning, on a narrowing plain. Here stood a village, but 133 ●
nothing is left now except charred ruins, it having been burnt down by the
bandits. We emerge into a red, hilly country, and here the Lang-k'ung River 137
receives an affluent.

The trail follows the left bank of the stream along the foot-hills and by the village called Hsün-chien-ssu 巡檢司, thence across the gravelly stream-bed, and continues on the right bank between roses and Pyracantha bushes. We cross a gravelly plain to the base of a red hill, which we ascend to the top, at an elevation of 7,550 feet. Here, to the right of the trail, is a small but beautiful lake called Kan-hai-tzu 乾海子. We now descend between pine-covered hills to a plain on which is situated the hamlet of Ying-shan-p'u 應山舖, elevation 7,350 feet. To our right is a steep, rugged mountain mass cut up by deep ravines or chutes. It is a sacred mountain called Fo-kuang-chai Shan 佛光寨山 or simply Fo-kuang Shan;[43] half-way up the mountain is a cave said to hold 10,000 people. A temple, called Ling-kuang Ssu 靈光寺, is visible on the slopes; the temple was built in the first year of Wan-li (1573) by the village police chief Lü Meng-hsiung 呂夢熊.

From here we follow over the well-cultivated plain, wheat being the most [243]
abundant crop, past the villages of Wen-pi-ts'un 文筆村 and Ch'ang-ying
長營, until we finally reach the hamlet of San-ying 三營 (Three camps). It
is a long, narrow village with a peculiar gate in the center. Elevation 7,500
feet. On this stretch we met long processions of Min-chia women carrying
furniture, latticed Chinese doors and windows, baskets or huge stacks of straw [438]
hats, and — these were in the majority — huge juniper coffin-boards seven feet long, four inches thick, and three feet wide. These came from Pai-mang Shan 白芒山, many stages to the north, where there are large forests of immense junipers — *Juniperus wallichiana*. They are floated down the Yangtze to Shih-ku and are thence carried to Teng-ch'uan and by boat on the lake to Ta-li.

From San-ying it is five li to Niu-kai 牛街 (Cattle-market).

A short distance beyond San-ying is a limestone hill called Huo-yao Shan [135]
火藥山[44] (Fire medicine or powder mountain): it is about 300 feet high, with
a pagoda (*wen-pi* 文筆) on the top. The rocks are full of holes and the entire hill is honeycombed; it is the only limestone hill in the immediate neighborhood. At its foot are boiling hot springs, the water being crystal clear as it boils and bubbles up (temperature 170° F.). Steam rises everywhere between the rice-fields and the people wash their clothing in the boiling pools. In February, 1935, this peculiar mountain suddenly erupted. A severe earthquake preceded the eruption, the noise emanating from the mountain sound-

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[43] It is also called Fo-kuang-chai 寨 and I-nü Kuan 一女關 (Pass of a woman). The latter name has reference to a narrow slanting defile back of the mountain. It was in this cave that Chu-ko Liang, marquis of Wu 武, captured Meng-huo 孟獲. Later in the Ming dynasty in 1383, General Fu Yu-te 傅友德 suppressed a rebellion of native chiefs who fled into this cave. At that time 13,000 people in all were decapitated and 400,000 families of the native tribes made their submission. It was then that Li-chiang made its submission to the Ming, and the Mo-so were pacified.

[44] Also called Huo-yen Shan 火焰山 (Flaming Mountain).

487 133 137 ing like thunder. Immediately after the earthquake flames burst forth from the mountain, so that the heavens were reddened. This lasted nearly an hour, after which no fire was visible. Later the people went to see the hill and found that a large section of it had fallen in, covering up several of the hot springs which flowed from its base. No one was injured.

579 Niu-kai is a village in ruins, thanks to the activities of the bandit chief Chang Chieh-pa and his hordes; when I passed through in 1928 he had only a few days before made his submission to the Yün-nan government. More exactly: holding a Belgian missionary as hostage, whom he threatened to kill should the governor of Yün-nan send further troops against him, he brought the governor to accept his own terms. Thus he was established as military ruler of the entire district. He sat with 1,000 of his bandits in the poor village which he had all but burnt to the ground, and the impoverished peasants had to feed the brutes who had ruined their homes. The village consists of about 600 families, and lies on the slopes of the foot-hills, at an elevation of 7,500 feet. It belongs to the magistracy of Ho-ch'ing 鶴慶.

487 133 137 *Sixteenth stage.* — From Niu-kai to Tien-wei 甸尾 is a distance of 70 li. Elevation 7,800 feet.

From the village of Niu-kai the trail keeps to the foot-hills which encircle the plain to the right. Somewhat beyond the village a path branches off at the end of the plain, into a deep valley which leads to Ho-ch'ing. This is the shortest way to Li-chiang.

Our trail leads across the Niu-kai plain to a limestone mountain with smooth cliffs on which inscriptions are still discernible dating back to K'ang-hsi (1662–1722). The mountain is called Kuan-yin Shan 觀音山 [45] (Goddess of Mercy Mountain), and so is the village a short distance beyond; a Buddhist temple [46] nestles at the foot of the cliff. In the south it joins on to the Tien-ts'ang Shan. Half-way up the mountain is a cave called T'ai-chi tung 太極洞. (Cave of the ultimate immaterial principle, *i.e.*, of the Chinese cosmology). In the center of the cave is a pond called Chin-lung t'an 金龍潭 (Golden dragon pool) which is said to be very deep (the depth being unknown).

A short distance beyond, at a tiny temple, the trail ascends the red hills covered with oaks, pines, *Pinus Armandi* and *P. yünnanensis*, Alnus, *Castanopsis Delavayi*, rhododendrons, roses, Berberis, etc., up over limestone mountains, through oak forest, to a pass with a few houses called Ch'ou-shui-ching 臭水井 (Stinking water-well). At this place many hold-ups and murders were committed by the bandit hordes of Chang Chieh-pa. He strung up his victims by the thumbs to branches of high trees, and tied rocks to their feet;

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[45] The name originated from a likeness of Kuan-yin cut into the rock of the mountain by Ko-lo-feng 閣邏鳳 (King of Nan-chao, 748–778) of the Meng family. Other names for the mountain are Fang-chang Shan 方丈山 (Abbot Mountain), Lien-hua Shan 蓮花山 (Lotus Mountain) and Hsiang-yün Shan 祥雲山 (Auspicious cloud Mountain). It is one of the seventeen famous mountains of the Nan-chao Kingdom. (From the *Ho-ch'ing chou chih*, ch. 4, fols. 5b–6a).

[46] The temple is called Miao-hsing An 妙行菴 (Hall of the practice of the Excellent or the Unfathomable). A board bearing the above characters is over the temple gate. It was presented by the Na-khi chief, Mu Hsing 木興, in the 33rd year of K'ang-hsi (1694). Mu Hsing was born in 1667 and died in 1720.

lighting a fire beneath he left them to their fate. It was always a dreaded pass 487 for caravans. At this summit are large groves of oaks (*Quercus Delavayi*); the 133 elevation is 8,930 feet. The motor road passes below and to the west of it. 137

The trail here descends a little, only to climb again to 9,250 feet, and then continues downward between round, low hills of yellowish-red clay, over a shallow basin-like depression which in the rainy season becomes a pond. This is called the Yeh-ya t'ang 野鴨塘 (Wild-duck pond). The trail goes down between pines to the village of the same name, which we found entirely in ruins, having been looted and fired by the brigands. The path leads steeply into a circular, unproductive, gravelly basin of which only the terraced slopes are cultivated. A big stream issues from the right, which in the summer is an unfordable torrent. It is here called the Sha-pa Ho 沙壩河, as it flows through a sandy plain lined with old poplars and willows. It is a treacherous river and has carried away several bridges; lately a new one of stone has been constructed. At the other end of the little sandy plain is the hamlet of Yeh-chi-p'ing 野雞坪 (Pheasant flat). Elevation 8,500 feet.

From this basin we climb over pine-covered hills on the top of which the trail continues. A little westward and ahead is the mountain mass of Lao-chün Shan 老君山 or Mountain of Lao-chün or Lao Tzu, the founder of Taoism. Beyond this mountain is visible La-pa Shan 拉巴山 (La-ba Ngyu in Na-khi), between 14,000 and 15,000 feet in height. To the extreme left, or south-west, is another high mountain which divides the Mekong from the Yang-pi. It is called Hsüeh-p'an Shan 雪盤山 (Snow-basin Mountain), but more commonly Yen-lu Shan 鹽路山 (Salt-road Mountain), for salt is brought [317] over it from the salt-well of La-chi-ming 喇雞鳴, west of Lan-p'ing 蘭坪 (Handel-Mazzetti on his map calls it the Ye-lu-schan).

The trail descends over a gravelly ridge winding along valley slopes with a roaring stream to our left, down to the plain of Tien-wei; we cross the same stream which we passed over at Yeh-chi-p'ing and arrive at the village of Tien-wei, after going through large groves of old oaks. Half of the village, situated on the slopes of a hill across the plain, was destroyed. The distance from Niu-kai to Yeh-chi-p'ing being 53 li, the latter is the regular lunch-stop. The elevation of Tien-wei is 7,800 feet.

Seventeenth stage. — From Tien-wei to Chiu-ho 九河 is a distance of 60 li. Elevation 8,150 feet.

The trail leads from Tien-wei past a temple downhill to the Chien-ch'uan plain, leaving the Chien-ch'uan Lake (Chien Hu 劍湖), which is said to be 60 li square, to the east. We pass a new bridge, called Hai-hung ch'iao 海虹橋 (Lake rainbow bridge), over the Tien-wei Ho (the river makes here a semicircle like a rainbow), which is none other than the Yang-pi River, by the village of Shang-teng 上登; at its entrance opposite the bridge, there is a large, now ruined, temple which is three li from Tien-wei. On the Chinese military map the town of Tien-wei is south-east of the lake, though in reality the lake is east of the town. The plain is intensively cultivated, while on the hill-sides grow *Catalpa Duclouxii*.

From the trail one has the first good view of the Li-chiang snow-range (Yülung Shan 玉龍山 — Jade dragon Mountain), although it is already visible

487 from Tien-wei. In the distance can be seen the northern peak of the range,
● 133 separated by the Yangtze from the main range. This peak is called in Na-khi,
137 Ha-ba ndshĕr nv-lv (the Ha-pa Shan 哈巴山 of the Chinese), simply called Hsüeh-shan 雪山 (Snow mountain) on the Chinese military map.

We follow the edge of the plain, skirting the foot-hills between fields of wheat, beans and peas (only the northern part of the plain is cultivated with rice), pass the hamlets of Han-teng 漢登 and Hsi-chuang 西莊, a distance of ten and a half li from Tien-wei; then Chu-chüan-ch'ang 猪圈場, and from there to Shui-chai 水寨. From this last village it is only a short distance to the walled town of Chien-ch'uan 劍川. Here we met hundreds of Min-chia
[482] peasants carrying heavy loads, some enormous earthen jars and pots, others mats, firewood, and pigs in baskets. Very large pigs were slung on poles between two men, the pig securely tied in a mat.

About 20 li from Tien-wei begin the walls of Chien-ch'uan (Rapier stream).
[322] This place is renowned for its carpenters, who are clever wood-carvers, and makers of furniture.[47] Chien-ch'uan is at an elevation of 7,750 feet. To the west, on the grassy slopes of the foot-hills, are thousands of graves. Here is the favorite camping place of the Tibetan caravans which come from the north to Ta-li and beyond. Above the graves on the hill-side is a large Buddhist temple called Ti-tsang Ssu 地藏寺 (Temple of the Bodhisattva Kshitigarbha, Lord of the Earth).

[243] The trail passes between irrigated wheat and rice-fields to the hamlets of Pan-teng-ho 板凳河 and Yung-p'an-ts'un 永盤村. We follow the left border of the plain, which narrows towards the north, passing the villages T'ai-

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[47] Chien-ch'uan is the ancient territory of the Man-i (savages). The Hsi-i (Western barbarians) called the town Lo-lu, for in their language *lo-lu* meant lake, and had reference to the Chien Hu or Chien-ch'uan Lake near which the town is situated. In the T'ang dynasty (618–906) it was the I-tu Lo-lu ch'eng 義督羅魯城. I-tu was one of the 10 original *chien* 瞼 (districts) of the Nan-chao Kingdom. (*Chien* is the Chinese transcription of the Tai word *keng* or *xieng*). The Lo-lu ch'eng is the present-day foundation of Wa-yao-ts'un 瓦窯村 (Tile kiln village). It is 15 li south of Chien-ch'uan. The walls of the Lo-lu ch'eng were built in the T'ang dynasty. In the beginning of the reign of T'ang Cheng-yüan 貞元 (about 786), Nan-chao fought Chien-ch'uan and captured the entire territory. Their chief changed his residence to Chien-t'an 劍賧 and changed its name to Chien-ch'iang 劍羌. The Nan-chao Kingdom established the government of Chien-ch'uan. In the Sung dynasty it was changed to I-tu t'an 義督賧 and was also called Po chou 波州.

In the beginning of the Yüan dynasty there was established the *so* 所 (Sub-military station) of the 1,000 families of I-tu (I-tu ch'ien-hu so 義督千戶所).

In the 11th year of Chih-yüan 至元 (1274), the name was changed to Chien-ch'uan hsien (Magistracy of Chien-ch'uan) under the rule of the Ho-ch'ing Lu 鶴慶路 (Ho-ch'ing Circuit). The *Chien-ch'uan chou chih*, ch. 3, fol. 15b, states that the military and civil yamen of the governor of the Circuit of Ho-ch'ing was established in the 8th year of Chih-yüan (1271) and the I-tu 義督 was changed to Chien-ch'uan hsien dependent on the Circuit of Ho-ch'ing. In the 17th year of Ming Hung-wu (1384) it was raised to a chou and the families of 18 li 里 (communes) were registered there. In ancient days Chien-ch'uan had no wall, but during the reign of Hung-chih 弘治 (1488–1505), magistrate Li Wen 李文 built a tamped earth wall. In the 15th year of Ts'ung-cheng (1642) the wall was changed to a brick one, 16 Chinese feet high, and 12 thick. The moat was eight feet wide and five deep. During an earthquake in 1688 the wall fell, the towers toppled over the gates, and it was not rebuilt until 1690; it was once more rebuilt in 1712 and again destroyed by an earthquake in 1751. In 1860 the Mohammedans flooded the town with water from Lake Chien and many lengths of the south-eastern part of the wall collapsed. It was finally rebuilt.

p'ing-ts'un 太平村, Liu-chia-teng 劉家登 and Tien-hsin-ch'iao 甸心橋. The 487
village of Mei-tzu-shao 梅子哨 is not on the Chien-ch'uan plain but beyond 133
a narrow ravine, the slopes of which are covered with pines. Opposite the village, in a lovely pine forest, are numerous graves. This or the village of Kan- 137
mo-ho 乾磨河 is the regular lunch-stop for the day. Five li from this village will bring us to the end of the stage, the village of Chiu-ho 九河 (Nine streams),[48] but there are still the villages of Chiang-tung 江東 and Wen-mu-ho 文木河 to be passed. Ere reaching Chiu-ho there is a beautiful isolated hill with a lovely forest of oaks (*Quercus semicarpifolia*), and thence we travel along the foot of a rocky hill entering the long valley which leads to Shih-ku 石鼓 on the Yangtze. Chiu-ho is situated on a low spur at an elevation of 8,150 feet. It is a miserable hamlet with a single dilapidated temple. Caravans bound for Li-chiang usually prefer to go beyond it to the hamlet of Tu-wo 杜鵝 also called Tu-wu 杜吳 on Chinese maps (Na-khi, Dtu-wùa).

We have now arrived at the border of the Li-chiang district, to which the village of Chiu-ho belongs. South of it is Chien-ch'uan territory.

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[48] Chiu-ho is called in Na-khi, Gkyi-wùa; and Kuan-shang 關上, at the end of the valley which extends north of Chiu-ho, is called Gkyi-wùa Ts'o-k'ö.

CHAPTER II

THE LI-CHIANG DISTRICT

487 *Eighteenth stage.* — From Chiu-ho to Li-chiang 麗江 is a distance of 90 li.
● 133 Elevation, 8,200 feet.

137 From Chiu-ho we follow the plain, leaving to the left the large village of Nan-su-mei 南蘇梅 and five li further on coming to the village of Pei-su-mei 北蘇梅,[1] the names meaning Northern and Southern Su-mei respectively. Opposite the village and the temple is a small open-air theater where we used to stop with our caravan on former journeys. In this region the walnut trees were still leafless. This at the end of April. The hills forming the western valley wall are a brilliant red and covered with pines (*Pinus yünnanensis*). Many villages are scattered along the foot-hills, some extending up their slopes (*see* description of Chiu-ho li, p. 178). Small trails lead from this valley to Lao-chün Shan 老君山, which has always been a rendezvous for brigands. From the village of Pei-su-mei, it is five li to the Na-khi hamlet of Tu-wo (P'u-wu in Min-chia) where the Na-khi caravans prefer to put up for the night. Both villages are situated at the eastern side of the valley; here, also, the hills are covered with pines and numerous walnuts; the latter, mostly cultivated, can be found along the road, besides pears, peaches and plums.

The trail meanders over the gravelly valley floor past Wu-li-p'ai 五里牌, then P'o-chio 坡脚 (Foot of the hill) or Kuan-shang 關上 (Na-khi, Ts'o-k'ö), 30 li from Chiu-ho. This is the last village in this valley, at the head of which is a beautiful, deep blue lake, the head-waters of the Yang-pi River. The lake is called Bbu-t'u-ndĕr (Shrimp pond), in Na-khi. From here it is a drop of 2,000 feet to the Yangtze and a distance of about 50 li to Shih-ku. The valley is inhabited mostly by Min-chia in the lower, and Na-khi in the upper part.

From the village of Kuan-shang the trail is paved, but is in a most terrible condition, and the grade next to impossible. It ascends from an elevation of 8,300 feet at Kuan-shang, over the partly forested mountain called T'ieh-chia Shan 鐵架山 which hems in the valley to the east, to the top of a pass at 9,800 feet, and shortly to another pass 10,100 feet above the sea. Here we have emerged on a rather large, dry plateau, the trail leading between low, round, [243] wooded hills. The Na-khi come from their villages and cultivate the gentle slopes of the hills, mostly with buckwheat and oats. On both sides of the trail are large sink-holes from which the plateau derives its name, Lo-shui-tung 落水洞 (Sinking water caves).[2] These holes, which are apparently of great depth, remind one of volcanic blow-holes or small craters; but here all is lime-

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[1] The village is called Ts'o-k'ö-muan in Na-khi (Lower Ts'o-k'ö). Transcribed in Chinese characters it is written Ts'o-k'uei mou [illegible]. It is also called Nan-kuan-chan 南關站.

[2] "The topography of this down country is very old and in striking contrast to the valley which leads to the Yangtze and Shih-ku, and in which Kuan-shang is situated. The features of the down, with its gentle, rounded hills and shallow valleys, were developed before the formation of the Kuan-shang valley. The rocks exposed in the western part of the downs belong to the Kaoliang Series. The latter consist of phyllites and chloritic schists, quartzites, crystalline limestone, and limestone breccia. They belong to the Archeozoic or earliest era of geological history." (GREGORY)

[p. 40]

stone, and the entire plateau is apparently hollow, as is the region of the lake 487
of La-shih-pa 剌是壩. The walls of the sink-holes are covered with oaks and 133
pines, the floors giving way in the center to funnel-like shafts.

The trail leads east over the undulating plain of yellow clay and extensive 137
limestone outcroppings, which remind one of the lava-flows of Hawaii, but are grey in color. These outcroppings are taken possession of by deep pink *Rhododendron racemosum* bushes which, with a prostrate form of *Quercus semicarpifolia*, form regular carpets.

Straight ahead is the famous pyramidal mountain Wen-pi Shan 文筆山 (Pencil Hill), called Sä-bpi zhĕr nv-lv, or Sä-bpi a-nan Ngyu, in Na-khi, whose slopes had suffered badly during the earthquake in 1925, when the whole western face of the mountain slid down, forming a huge talus slope. The mountain is renowned in Tibet. It represents a mountain deity called Zhi-da-mung-po (gzhi-bdag-smug-po གཞི་བདག་སྨུག་པོ). (*See*: *San-pi-wai-lung* p. 184).

Further the trail turns north-east over the same plateau (called in Na-khi, La-bpiu-k'o), at an elevation of 10,000 feet, and then descends to a little shrine called the Shan-shen Miao 山神廟 (Shrine of the mountain spirit). It continues on down to a lower plateau — again with sink-holes — the level places being under cultivation. From here the Li-chiang snow range is now visible to the north.

The crops on this plateau are dependent wholly on rain, for it is entirely 312
waterless. The lowest part stands at 9,400 feet, and the dusty trail seems endless, but descends at last through pine forest to the plain of La-shi, in Chinese La-shih-pa 喇是壩 also written 剌是壩). The caravan-stop is at the hamlet of Sä-bpi wùa boa (also called Sä-mbi wùa-boa in the Dto-mba or Na-khi priest books). Elevation 8,700 feet.

Beyond the village a wooden bridge leads over the La-lo-k'a stream, whence the trail runs between the La-shi Khü (Lake of La-shi), and the mountains and then north-east towards the pass over the spur which joins the southern end of the Li-chiang snow range with Ma-an Shan 馬鞍山 and Wen-pi Shan 文筆山. The pass is called in Na-khi, La-shi gkaw-gku, is 8,750 feet above sea level, and 20 li from La-shih-pa. From its foot it is eight li across the plain to the town of Li-chiang.

As the region to the south of Li-chiang is inhabited mainly by the Min-chia tribe it may not be out of place here to say a few words about these neighbors of the Mo-so, or Na-khi.

THE MIN-CHIA TRIBE (PLATES 7, 8)

The Min-chia 民家, called Lä-bbu by the Na-khi and considered by them 101
as their second elder brother — the first being the Tibetan, whom they call Gv-dzu — are known to the Chinese, especially in their literature, as Pai-jen 白人 (White people). In their own language they call themselves P'ĕr-tsu, colloquially they speak of themselves as P'ĕr-nv-tsu. They are scattered over much of Yün-nan and formed once the principal population of the ancient Nan-chao Kingdom. Unlike the Na-khi they have no written language. They are much intermingled with the tribes which live in the neighboring region of

CHAPTER II

GENERAL HISTORY OF THE REGION

173 The following pages are translations of the *Yen-ko* 沿革 (Successive changes) in the history of Li-chiang and the territory to which it belonged, according to the *Li-chiang fu chih lüeh*, Vol. 上, ch. 3, fol. 12b.

Between 298 and 262 B.C., we briefly recall, Chuang Ch'iao, a general of the State of Ch'u, invaded the region and established the Kingdom of Tien (*see* pp. 5–6 for details of this period).

In the fifth year of Han Wu Ti and the period of Yüan-kuang 元光 (130 B.C.) "the Emperor appointed Ssu-ma Hsiang-ju 司馬相如, the Chung-lang-chiang 中郎將 (Lieutenant-General), and the Fu-shih 副使 (Assistant Commissioner) Wang Jan-yü 王然于, and others to proceed with the Imperial Insignia to the Hsi-i (Western barbarians). Thereupon the different rulers of the Jan-mang 冉駹[1] and Yeh-yü 楪榆[2] petitioned to become subjects of the

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[1] The regions to the north of Tso-tu 莋都, on the western border of the State of Shu, comprised at the time of the Han dynasty a certain number of tribes, governed by their great chiefs. Among them the Jan-mang occupied first rank. Originally there were two tribes, the Jan and the Mang. The Jan-mang changed their residence occasionally in search of pasturage. They advanced up to the western frontier of the State of Shu. In the sixth year of Yüan-ting 元鼎 of the Emperor Wu Ti (111 B.C.) their territories were united into a *chün* 郡 (a territorial division), which received the name of Wen-shan 汶山. — That is what the *Mou chou chih* says in ch. 1, fol. 7a.

The *Wen-chih chi lüeh* 汶志紀略, ch. 1, fol. 4b, says that in the Han dynasty their territory was called Mien-ssu hsien 綿虒縣, subject to Shu Chün 蜀郡. In the Eastern Han it became the Mien-ssu tao 道, while in the Shu Han it became the Wen-shan Chün 汶山郡. This is the territory of the present Mou hsien 茂縣 in the Min valley, six stages north of Ch'eng-tu, on the north-west border of Ssu-ch'uan. The Wen Mountain, which has given the name to the district, is north-west of Mou chou. On Chinese maps showing the domain of the Fighting States the mountain is situated on the extreme north-western border of the State of Shu, and south of the T'ao Ho 洮河 and the Min Shan 岷山 in the present The-wu or The-wo ཐེ་བོ (The-bu) country 鐵布 (T'ich-pu). In the Great Geography of China it is considered the Min Shan, but not the Ku Min Shan 古岷山 (Old Min Shan), which is apparently the one in Kansu. The *Wen chih chi lüeh* says that the Yu kung 禹貢 Min Shan 岷山 leads to the *Chiang* 江 (Yangtze), and the *Shih Chi* 史記 states that the Min Shan is the Wen Shan 汶山.

133 The Kan-su Min Shan is a distinct range for the most part composed of grey limestone only the eastern part is conglomerate. To the north of it flows the T'ao River 洮河 and to the south of it the Pai-shui Chiang 白水江 or Pai-lung Chiang 白龍江. Many lateral valleys debouch into these rivers north and south respectively, their sources being among the crags of the Min Shan. The valley of the Pai-shui Chiang is quite broad and fertile especially in its central part. Thus the Min Shan is a distinct and separate range. Of course the entire region is mountainous but the mountains are much lower both to the north and to the south of the Min Shan; they are mere hills in comparison, especially those to the north of it. In the extreme eastern end the limestone extends across the Pai-shui Chiang Valley and there the river flows in a narrow chasm. It is here that the Min Shan connects with the range to the south where two streams, the To-erh-ku Ho 多兒谷河 and the A-hsia-ku Ho 阿夏谷河 join the Pai-shui Chiang coming from the south and having their source in the range over which a pass called the Yang-pu Shan-k'ou 陽布山口 leads into Ssu-ch'uan; the pass is the border between Kan-su and Ssu-ch'uan. From here long valleys lead

Chinese Imperial rule. In the first year of Yüan-feng 元封 (110 B.C.), Ssu-ma 173
Ch'ien 司馬遷 [born about 145 B.C., died between 86–74], a Lang-chung 郎中 (Senior Secretary of a board), was commissioned to subjugate Pa Shu 巴蜀 (Ssu-ch'uan) in the west, and to seize the territory of Chiung 邛, Tso 筰 and K'un-ming 昆明,[3] namely the land of Li-chiang."

In the second year of Yüan-feng 元封 (109 B.C.) the generals Kuo Ch'ang

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south as the Ta-shen kou 大深溝 which debouches into the Hei Ho 黑河 which has its source 133
south of the range flanking the Pai-shui Chiang to the south. Here all existing maps are entirely incorrect both foreign and Chinese (*see* J. F. ROCK, The Land of the Tebbus in *The Geographical Journal* (R. G. S. London) Vol. LXXXI, no. 2, 1933; p. 108–127, map on p. 112). There follows a maze of mountains with valleys, the main being that of the Hei Ho flowing south to where it is joined by the Pai Ho 白河, the latter having several sources all coming from the south or southeast and flowing north till they mingle with the Hei Ho and then flow east past Nan-p'ing, to Wen hsien 文縣. It is the range to the south of this stream, extending from west to east, to the north of Sung-pan and Lung-an, now called P'ing-wu 平武, which is the Min Shan of Ssu-ch'uan or the Wen Shan of the ancients. A pass known as the Kung-kang Ling 弓杠嶺 leads over it and it is here that the Min Chiang 岷江 or Min River has its source. V. K. Ting on map 27 gives the Min Shan to the south of the Pai-lung Chiang and for the actual Min Shan of Kan-su he gives the name Hsi-ch'ing Shan 西傾山?, both are incorrect. The Hsi-ch'ing Shan of the Tribute of Yü or Yü-kung is none other than the Tibetan Klu(i)-khra-bu-lag, pronounced Lu(i)-chhra-bu-lag which in the *Hsi-yü t'ung-wen chih* 西域同文志 is transcribed Lo-ch'a-p'u-la 羅察布拉. This mountain range which I visited and where the T'ao Ho, called in Tibetan Klu (Lu) Chhu, has its source (whence the range derives its name Lui-of the Lu River), is to the west of the Min Shan and is undoubtedly an extension of it, being also of limestone, but grassland separates the two ranges.

[2] Yeh-yü is the present Ta-li and was 10 li north-east of T'ai-ho hsien 太和縣. In ancient 101
days, during the Han dynasty, Yeh-yü must have comprised a larger area, for Ma Tuan-lin speaks of the savages of Yeh-yü. The name Yeh-yü first appears during the period Yüan-feng in the second year of Han Wu Ti (109 B.C.). The Yeh-yü were a tribe, as were the Ku-hui 姑繒 who lived with them in the same territory. The land of the Ku-hui-i was to the east of Teng-chuan 鄧川, whose territory adjoined Yeh-yü. In the 18th year of Chien-wu 建武 (A.D. 42) of the Later Han dynasty the Yeh-yü savages rebelled and killed their chief official.

Under Han Wu Ti, in the sixth year of Yüan-ting (111 B.C.) there were founded 15 hsien (districts) in the Commandery of Yüeh-sui or Yüeh-sui Chün 越巂郡. The first was Chiung-tu 邛都. This is the land south-east of the present district of Hsi-ch'ang 西昌縣 in Ssu-ch'uan. Ting-tso 定筰 was the present Yen-yüan hsien 鹽源縣, also in Ssu-ch'uan. Ta-tso 大筰 was to the north of Hui-li chou 會理州. Ku-fu 姑復 at that time was the land west of Li-chiang. — From the *Yün-nan T'ung-chih*, ch. 9, fol. 3b. The *Yen-yüan hsien chih*, ch. 2, fol. 6a, says Ta-tso is supposed to be the present Mien-ning hsien 冕寧縣. Actually it is the Mu-li 木里 and Kua-pieh 瓜別 of Yen-yüan.

[3] Chiung 邛 was east of Yüeh-sui 越巂, in the present Hsi-ch'ang 西昌 of Ssu-ch'uan, and the district of Tso 筰 west of it, while K'un-ming 昆明 was the territory west of I chou 益州, the K'un-ming of to-day. Li-chiang at that time belonged to Yüeh-sui Chün 越巂郡 and was called Ting-tso hsien 定筰縣. The Tso were a nomad tribe and so were the Chiung. Jan and Mang. They were also called Tso-tu 筰都 and Chiung-tu 邛都. The *Shih Chi* 史記, ch. 123, fol. 8b, relates that Han Wu Ti sent several embassies over four different routes to the western regions of Shu 蜀. Each of the embassies covered one to two thousand li of territory. The northern embassy's route was closed by the Ti 氐 and Tso 筰 tribes, and the southern embassy's route was closed by the Sui 巂 and K'un-ming 昆明 savages. In K'un-ming there existed neither a prince nor a chief, but they understood stealing and robbing, and murdered messengers from the Court of Han at every opportunity, so that no one could pass.

173 At that time Lung-yu-na 龍佑那, descendant of the 15th generation of Jen-kuo of the Pai-tzu Kingdom 白子國, was enabled to pacify and settle his people. Chu-ko Liang appointed him as their chief, gave him back his own land, conferred on him the surname Chang 張, and changed the name of Pai-tzu Kingdom to Chien-ning Kingdom 建寧國. A walled city was built and called the Chien-ning ch'eng 建寧城,[18] and an iron pillar and stone monument were erected in memory of these military exploits.

During the five pre-T'ang dynasties. — In the seventh year of the period T'ai-shih 泰始 of Chin Wu Ti 武帝 (271), there was established Ning chou 寧州,[19] to whose administrative control was allotted a part of the district of I chou which still existed and had its own administration.

In the fifth year of T'ai-k'ang of the same emperor (284) Ning chou was abolished and the district placed under I chou.

In the second year of T'ai-an 太安 of Emperor Hui Ti 惠帝 (303) Ning chou was re-established.

In the second year of Yung-chia 永嘉 of Emperor Huai Ti 懷帝 (308) I chou was renamed Chin-ning 晋寧, which name was retained by the Sung 宋 (420–478), Ch'i 齊 (479–501), Liang 梁 (502–556) and Ch'en dynasties 陳紀 (557–589).

In the 15th year of K'ai-huang 開皇 (595) of the Sui 隋 dynasty, there was established the Tsung-kuan fu 總管府 (Civil government of I chou), which controlled Nan-ning chou 南寧州 from a distance without an official taking up his residence in that place.

Under the T'ang dynasty. — In the seventh year of the period Wu-te 武德 of T'ang Kao Tsu 高祖 (624), the Emperor ordered Wei Jen-shou 韋仁壽[20] to investigate the affairs of Nan-ning chou. He led 500 soldiers to the Hsi-erh Ho 西洱河,[21] to take charge and govern. He established eight chou and seven-

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[18] Chien-ning ch'eng is the present village of Mi-tu 彌渡, 30 li south of Hung-ngai, two and a half stages south-east of Ta-li. In Mi-tu there is a temple called T'ieh-chu Kung 鐵柱宮 (Iron-pillar Temple), in which an iron column is preserved to this day. The pillar was cast by the Chien-ning King, Chang Lo-chin-ch'iu 張樂進求. A second one (the first having perished) was cast by Meng Shih-lung 蒙世隆, who called it T'ien-tsun chu 天尊柱 (Celestial venerable column).

[19] In the Han dynasty it was the land of I chou, and in the Minor Han it was the Hsing-ku Chün 興古郡, extending north-east of the Lake of K'un-ming (Yün-nan fu). Ning chou during the Chin dynasty extended south of the Yün-nan fu Lake and adjoined A-mi chou 阿迷州, the present K'ai-yüan 開遠. Later, during the Ming dynasty, it belonged to Lin-an fu 臨安府, the Chien-shui hsien 建水縣 of to-day.

[20] According to the *Chiu T'ang Shu* (Old T'ang History), he was a native of Wan-nien 萬年 of Yung chou 雍州. On account of his ability he was sent to examine the military governor of Nan-ning chou; he administered the affairs of state from Yüeh-sui. He was ordered once a year to this district to encourage and comfort the people.

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[21] The Hsi-erh Ho has its source 50 li south-west of Ho-ch'ing, on the mountain Hei-ni-shao Shan 黑泥哨山. This mountain is densely forested and a favorite haunt of robbers. It flows south-west and receives several affluents; thence flows south by Kuan-yin Shan 觀音山 and is there called the Kuan-yin Ho, also the Mi-tz'u Ho 彌茨河. It receives an affluent from Erh-yüan 洱源 called the Lang-k'ung Ho 浪穹河, which has its source in the Pa-ku Shan 罷谷山. The main branch of the Hsi-erh Ho comes, however, from the south-west of Ho-ch'ing. It flows into the Erh Hai 洱海 (Ta-li Lake) at Teng-ch'uan 鄧川. The dikes

teen hsien. The Li-chiang Records state that he established seven chou and fifteen hsien. 173

In the 23rd year of the period Cheng-kuan 貞觀 (649) Chang Lo-chin-ch'iu 張樂進求 (*see* p. 9) abdicated in favor of the Meng family. The Meng family were originally of the Ai-lao barbarians, whose king was called Chiu-lung 九隆. A man by name Hsi-nu-lo 細奴邏, descendant of Chiu-lung (he was a descendant of the 36th generation of Meng-chü-tu 蒙苴篤, and fifth of Ti-meng-chü 低蒙苴 [*see* p. 9] who ruled from 649–764) was one day ploughing fields in the Wei Mountains 巍山.[22] He had often been noticed by others as possessing strange and lucky signs. Chang Lo-chin-ch'iu, descendant of the 17th generation of King Lung-yu-na 龍佑那 of the Pai-tzu Kuo 白子國, abdicated in favor of Hsi-nu-lo, who was then created Ch'i Wang 奇王 Mysterious King and called his kingdom Ta Meng 大蒙 (Great Meng Kingdom).[23]

The *Nan-chao Yeh-shih* states that Hsi-nu-lo called himself Ch'i-chia Wang 奇嘉王 (the Mysterious and admirable King).

At the close of the Pai Kuo 白國 (White Kingdom) there were six *ch'ü-shuai* 渠帥 (leaders), who called themselves Liu chao 六詔 (Six kings), *chao* meaning king. They were all the descendants of Chiu-lung, founder of Ai-lao Kuo. Hsi-nu-lo, who lived in Meng-shih ch'uan 蒙氏川 (the present Meng-hua, one and a half stages south of Ta-li), called his realm the Meng-she chao 蒙舍詔. The others were the Yüeh-hsi chao 越析詔 (Yüeh-hsi is the present Li-chiang hsien); the Lang-k'ung chao 浪穹詔 (Lang-ch'iung [but read *k'ung* in Yün-nan], the present Erh-yüan, one and a half stages north of Ta-li); the Teng-t'an chao 鄧賧詔 (Teng-t'an, the present Teng-ch'uan hsien 鄧川縣, 90 li north of Ta-li); the Shih-lang chao 施浪詔 (the present [banks] of the Mi-tz'u Ho 瀰茨河, the former Lang-k'ung in the district of Erh-yüan); and the Meng-sui chao 蒙嶲詔 (the present Chien-ch'ang 建昌 [Hsi-ch'ang 西昌] in Ssu-ch'uan and north of K'un-ming).

Only the Meng-she chao 蒙舍詔, which lay to the south of the other five kingdoms, was therefore called the Nan-chao (Southern Kingdom).

In the 26th year of the period K'ai-yüan 開元 of T'ang Hsüan Tsung 玄宗 (738), Wang Yü 王昱, the Chieh-tu-shih 節度使 (Imperial commissioner) of Chien-nan 劍南,[24] received bribes from P'i-lo-ko 皮羅閣[25] requesting that he

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through which the stream flows across the Teng-ch'uan plain were begun during the reign of Ming Cheng-t'ung (1436–1449). They burst ten times between 1691–1775. 3/2 133

[22] The present-day Wei-pao Shan 巍寶山, situated 20 li south of Meng-hua 蒙化 (one stage south of Hsia-kuan 下關). 173

[23] The Ta-meng Kuo (Nan-chao Kingdom) existed from 649–902. There were 13 generations of rulers over a period of 255 years.

[24] The *Nan-chao Yeh-shih* says Chien-ch'uan 劍川; Chien-nan is correct. It was the ancient State of Shu and during the T'ang dynasty was called Chien-nan. The Chien-nan Chieh-tu-shih resided in Ch'eng-tu fu 成都府 and controlled 39,000 troops and 2,000 cavalry. In the west he attacked the T'u-fan and in the south he governed the Man (savages).

[25] P'i-lo-ko was the great-grandson of Hsi-nu-lo, founder of the Nan-chao Kingdom. He was the son of Lo-sheng-yen 邏盛炎 and was 31 years of age when he ascended the throne of Meng-she chao in the 16th year of K'ai-yüan (728). The *Nan-chao Yeh-shih* states that the above mentioned event, that is, the combining of the five other kingdoms, or *chao*, took

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[p.108 D]

(Courtesy Nat. Geogr. Soc.)

PLATE 52. — THE NORTH-WESTERN PART OF THE LI-CHIANG PLAIN

麗 江 壩 白 沙 鄉

The Hsiang or Commune of Pai-sha, looking south-east from the trail to Här-lër-gkv. Lower left, the village of Dü-gkv or Yü-lung-ts'un; the building embowered in the grove of tall trees to the right of village is the Pei-yo Miao. See Plate 61.

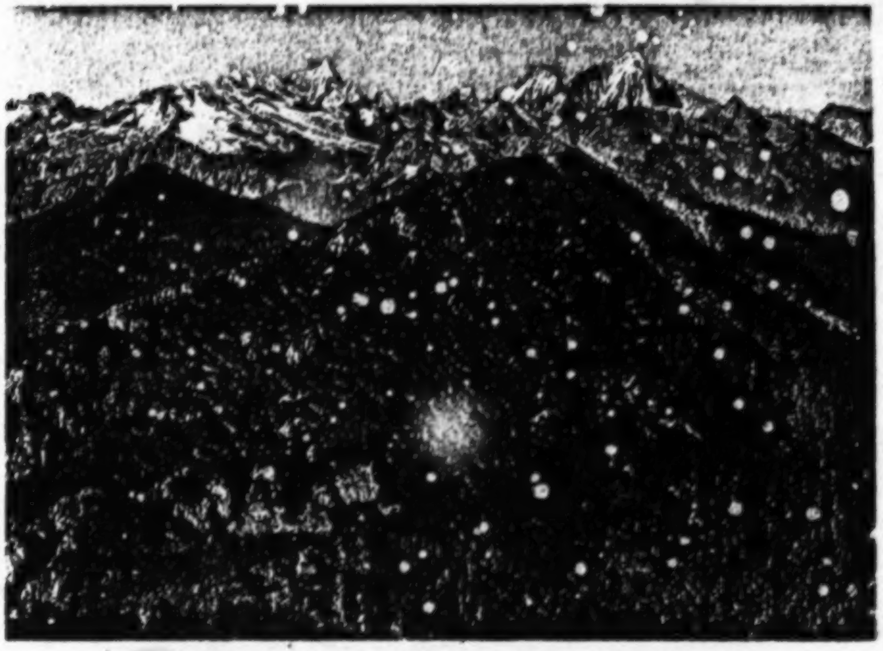

PLATE 55.—THE THREE PROTECTING LORDS, THE GANGKAR-LING SNOW PEAKS

[illegible]

The Gangkar Rimm gompo, the Three Protectors. The three peaks rise from a plateau 17,000 feet in height. From left to right they are: Jambyang, Chenrezig, Chhana-dorje. Photographed from an elevation of 14,000 feet west of Mt. Nu-tai-ga, in Mu-li; Hsi-k'ang. See also Plates 56, 57, 58, 59.

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(*Courtesy Nat. Geogr. Soc.*)

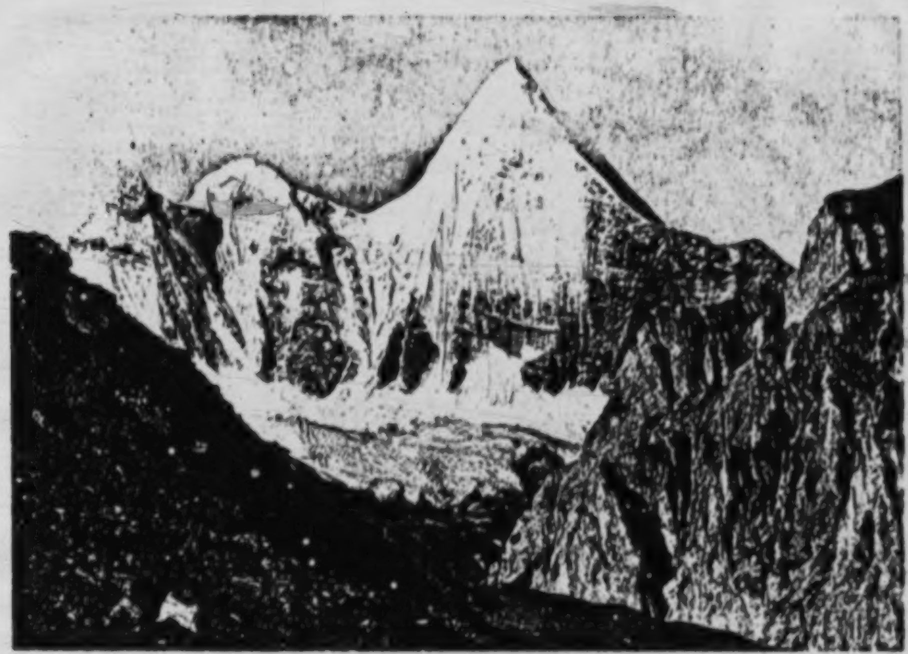
Plate 56.—Mount Chhana-dorje, the Holder of the Thunderbolt of the Gangkar-ling System

[illegible] ([illegible]) [illegible]

As seen from a ridge near Dra-go-tse, elevation 15,350 ft. Approximately 21,000 ft. in height.

[p. 108 H]

[p.108 I]



(Courtesy Nat. Geog. Soc.)

Plate 57. — Mount Jambyang, the God of Learning of the Gangkar-ling System

貢 嘎 嶺 文 殊 山

Photographed from Bayu Camp with front lens removed, elevation 15,800 ft. Approximately 21,000 feet in height.

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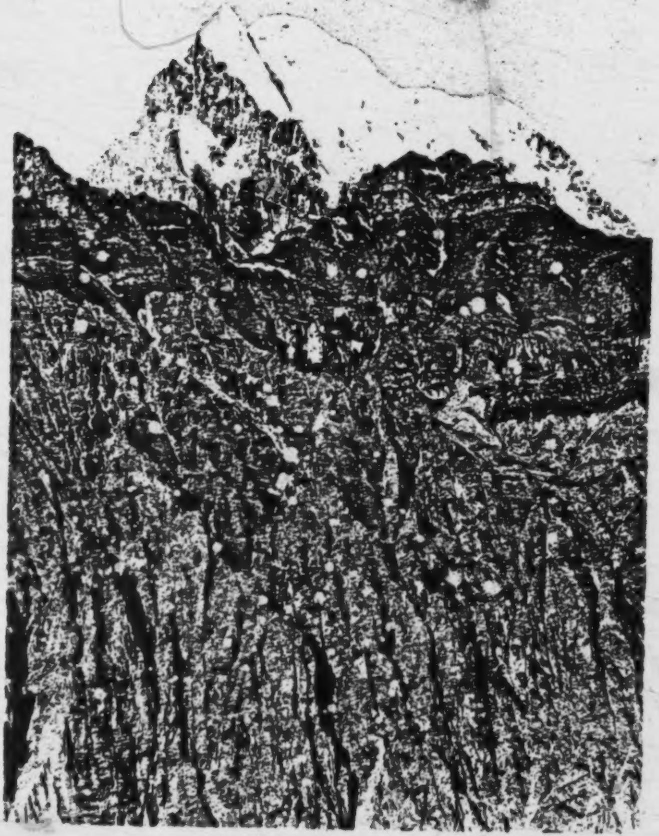
(Courtesy Nat. Geogr. Soc.)

PLATE 58. — JAMBYANG AND CHENRESIG OF THE GANGKAR-LING SYSTEM

[illegible]

Photographed from Bayu Camp, elevation 15,800 feet.

[p. 108 J]



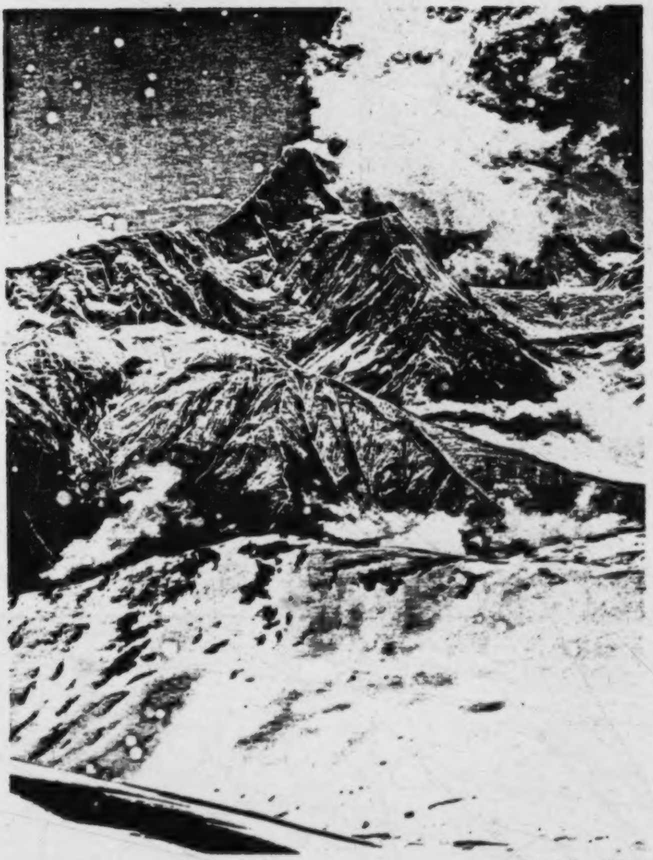
(Courtesy Nat. Geogr. Soc.)

PLATE 59.—MOUNT CHENREZIG OR KUAN-YIN, THE GODDESS OF MERCY OF THE GANGKAR-LING SYSTEM

[illegible] 山

Photographed from Bayu Camp with front lens removed, elevation 15,800 ft. The deeply eroded cliff is porphyry and is not part of the main peak, a deep gorge separates the mountain from the cliff. It is the highest of the three peaks and probably 21,500 feet in height.

[p. 108 k]



(Courtesy Nat. Geogr. Soc.)

PLATE 60. — MINYA GANGKAR, THE MINYA SNOW PEAK

康 定 明 雅 貢 噶 大 雪 山

The highest peak of the Minya Gangkar Snow range, altitude 24,900 feet. Photographed from a ridge overlooking Bü Chhu Lung-pa east of Yü-lung-shih from an elevation of 16,500 feet.

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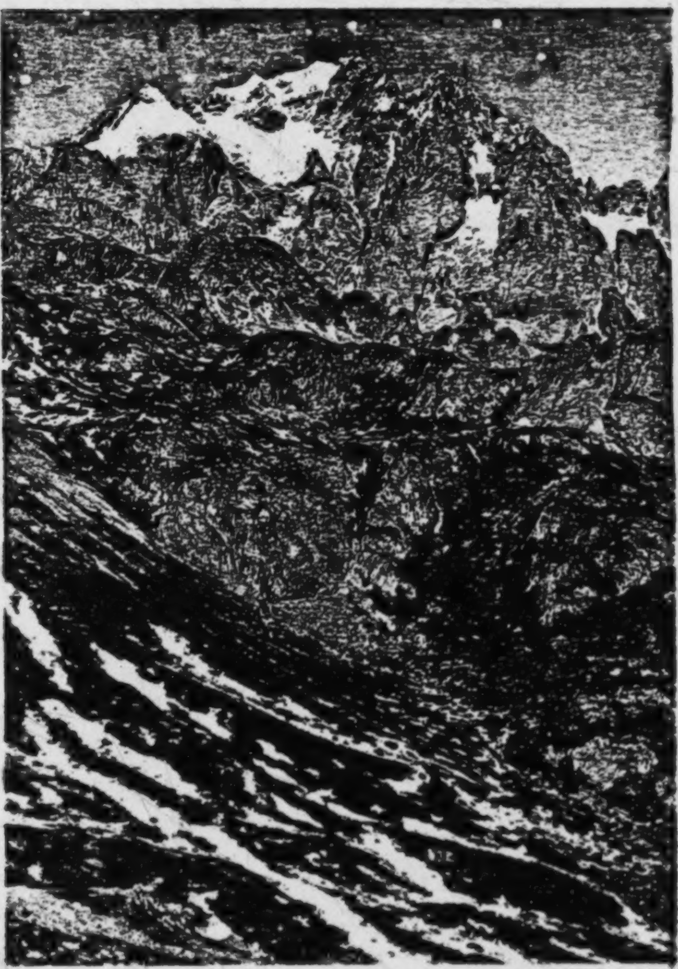

(Courtesy Nat. Geogr. Soc.)

PLATE 68. — THE LIMESTONE MASS OF SHAN-TZU-TOU

玉 龍 山 扇 子 陡 山 峰

View from near the edge of Sa-ba lo-gkv gorge looking west. The dark patches in the foreground are *Rhododendron prostratum* growing on the scree. Between the main peak and the rugged limestone mass beyond the scree lies the 4,500 feet deep gorge Sa-ba lo-gkv. Photographed from an elevation of 15,500 feet.

[p. 140 D]

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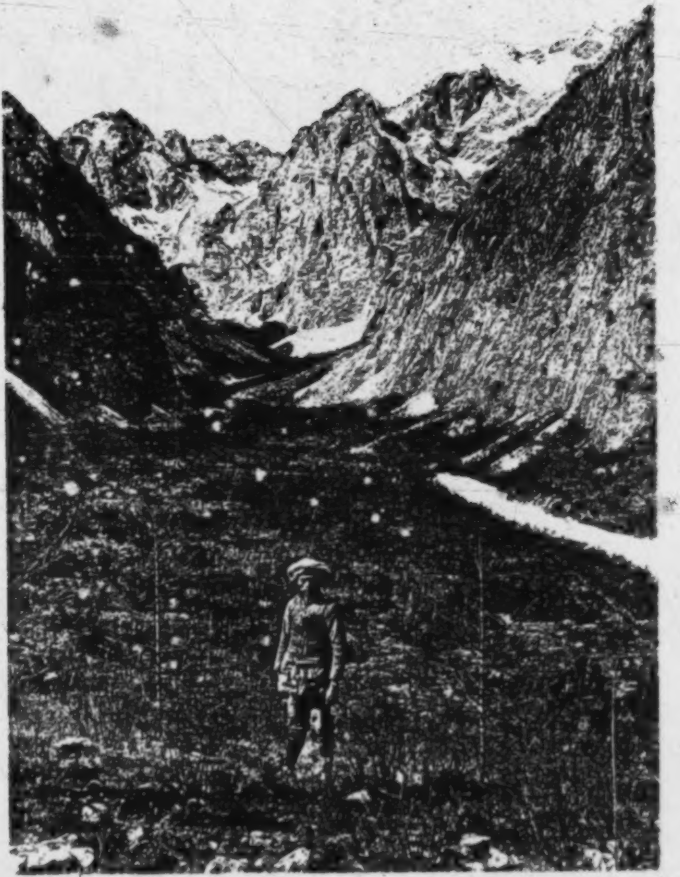

(Courtesy Nat. Geogr. Soc.)

PLATE 70. — THE GORGE SA-BA LO-GEV

[illegible]

The gorge which has no outlet was once glacier-filled; it is now waterless except in its upper part. Forest of spruce and Rhododendron which give way to firs higher up fill the gorge. The glacier in the upper right descends from the highest peak, Shan-tzu-tou, its snout is now at the extreme head of the gorge. Photographed from La-ao-gko-dshwua elevation 12,300 feet, and 300 feet above the floor of the gorge. The leafless trees in the foreground are larches (*Larix Potaninii*).

[p.140 F]

[p.140G]

(Courtesy Nat. Geogr. Soc.)

PLATE 71. — THE SA-BA GORGE

[illegible]

The mighty gorge once filled with a glacier is now dry and the limestone floor is sparingly covered with *Pinus yunnanensis*. It extends east from about the center of the snow range, south of the Yangtze. A similar gorge (Gyi-p'ä k'a) but longer, extends west from the other side of the range in contraposition of Sa-ba; it is 2,690 feet lower than Sa-ba. The broad rocky mass above the pine-covered spur (left) is Ggö-gko 'a-k'ö; La-ss-gko-dsi-wua is near the head (top) of the pine-covered spur whence Plate 70 was taken.

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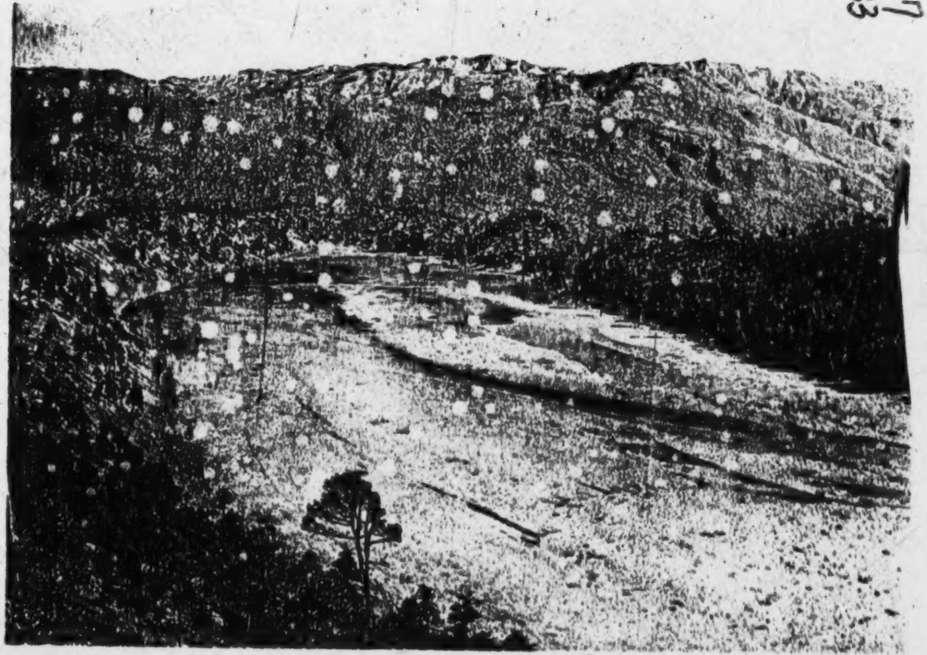
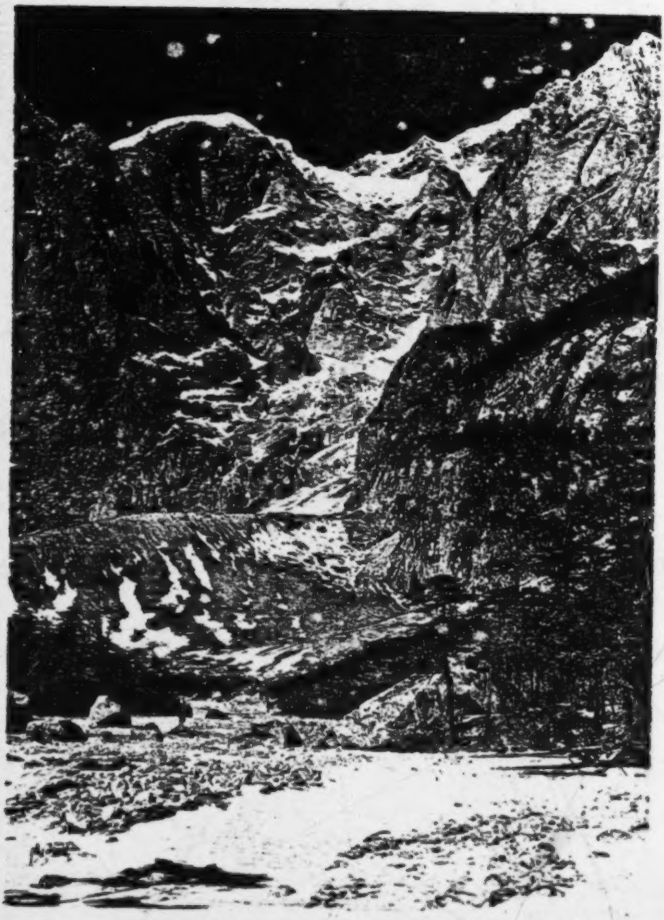
[p.140.H]



(Courtesy Nat. Geogr. Soc.)

PLATE 72. — SA-BA DÜ-LA-LO, THE NORTHEASTERN BRANCH OF SA-BA

The floor of this part of Sa-ba is composed of almost pure marl; the encircling moraines are covered with *Pinus yünnanensis*. The distance from Sa-ba lo-gkv, the head of the gorge, to the end of Sa-ba dü-la-lo is over three miles. The glacier which once filled this gorge has now retreated to its very head.



(Courtesy Nat. Geogr. Soc.)

PLATE 75. — THE GLACIER AT THE HEAD OF SA-BA LO-GKV

The glacier which once filled Sa-ba is fed by the avalanches of ice and snow from Shan-tzu-tou visible in the picture. In the summer waterfalls tumble over the limestone cliffs which form the head of Sa-ba or Sa-ba lo-gkv. Elevation of glacier 13,250 feet.

[p. 140 I]

2: Rock K-5 (1934-) 1947 AF16 Southwest China AF16

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[p.140 M]

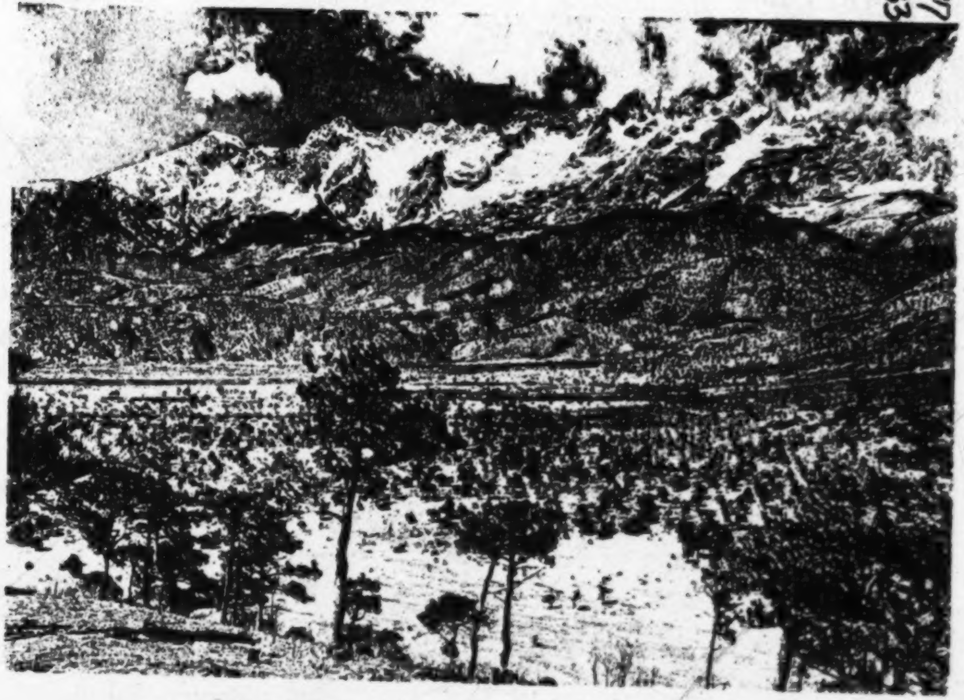
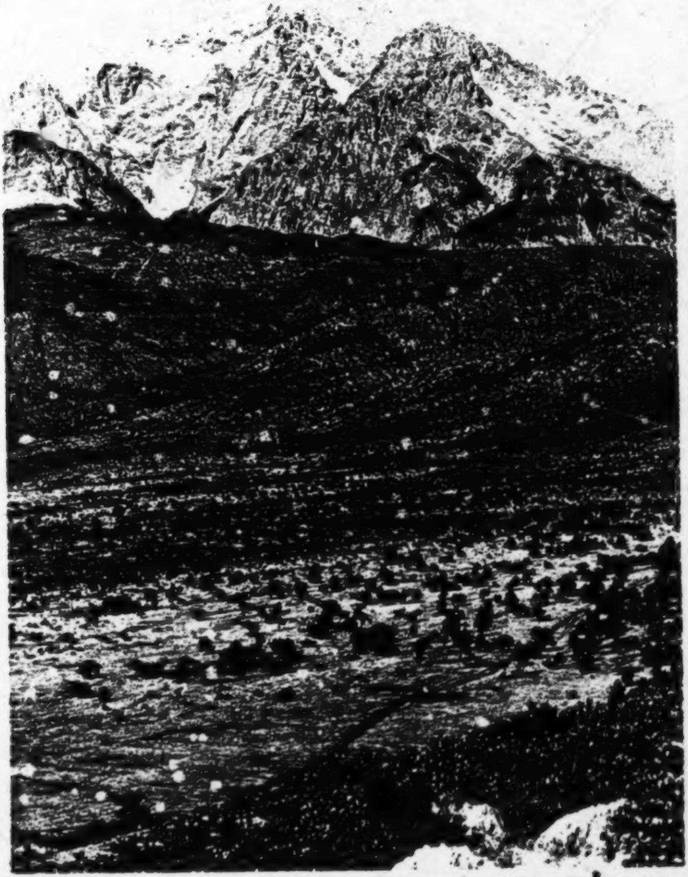


PLATE 77.—SOUTHERN END OF THE YÜ-LUNG SHAN IN WINTER SNOW

玉 龍 山 南 支 概

View across the upper end of the Li-chiang plain from the eastern limestone range at Daa-daa mbu. The trees are all pines (*Pinus yünnanensis*). The first snow-covered crag (left) is Hua-lü-bpu. The others are called first half Nv-lv-na, the second Nv-lv-p'ĕr (black and white silver rocks) owing to the black and white scree which descend from the crags.



(Courtesy Nat. Geogr. Soc.)

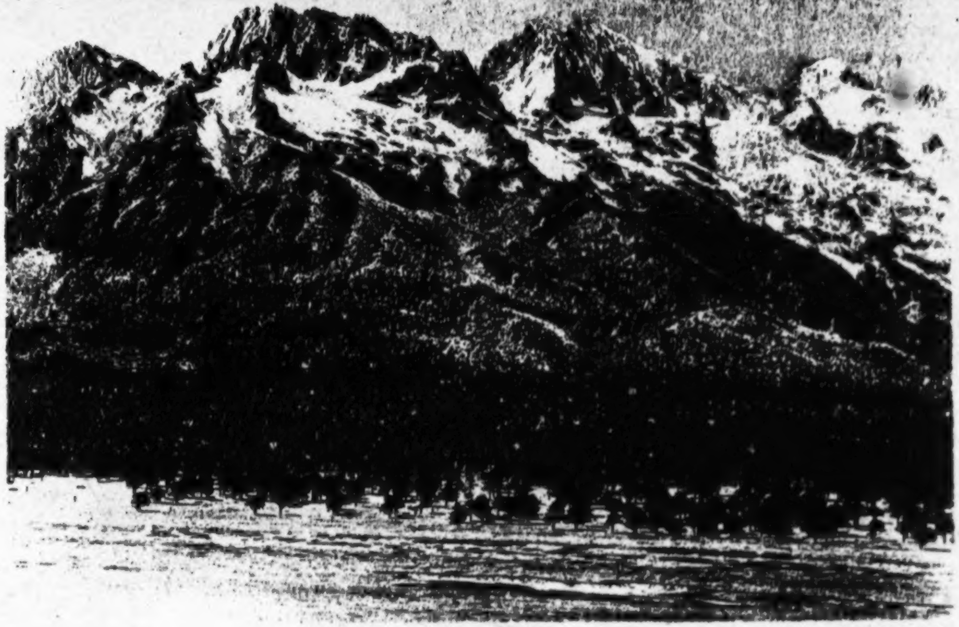
PLATE 78.— MOUNT SHAN-TZU-TOU

玉 龍 山 扇 子 陡

View from Dza-dza mbu (Dshi-bŏ gyi-tsī) across northern end of Li-chiang plain and west to Shan-tzu-tou. The Sa-ba gorge is beyond the diagonal spur. Pine trees on plain; scrub oak and limestone in foreground. Where the lowest snow field seems to join the spur is La-zo-gko-dshwuà.

[p.140 N]

[p.140-0]



(Courtesy Nat. Geogr. Soc.)

PLATE 79. — NGA-BA, THE ANCIENT BED OF AN ICE LAKE

玉龍山乾海子，古冰湖底子

Situated at the foot of the eastern slopes of the Yü-lung Shan, elevation 10,500 feet. The trees on the grassy plain are pines (*Pinus yünnanensis*) which higher up give way to poplars (*Populus Bonatii*) and larches (*Larix Potaninii*). The first peak (left) is Ch'wua-lo-gku: the second Sa-ba nv-lv; the third Shan-tzu-tou. Note the man on horseback in lower right.

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133

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133

[p.140 P]

(Courtesy Nat. Geogr. Soc.)

PLATE [illegible]. — NGA-BA TRANSFORMED INTO A BLUE LAKE

[illegible]

Only during summers of exceptional heavy rains does a lake form at Nga-ba; by spring, however, the waters disappear entirely. The author's camp can be seen on lake shore (center). The central peak is Nga-ba zo-lo; the last peak Gyi-nä zo-lo.

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PLATE 83. — THE WHITE WATER GLACIER STREAM

玉 龍 山 白 水 河

Looking up the Pai-shui stream, the Gyi-p'ĕr of the Na-khi, from an ancient stone bridge, elevation 10,000 feet. Spruces, willows and rhododendrons line the stream-bed. The rocky mass on the left is Nga-ba nv-lv; the higher snow-covered peak, Gyi-nà nv-lv.

[p. 156 C]

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[p. 156D]

PLATE 84. — NDA-ZA GKO, THE LOVELIEST OF ALPINE MEADOWS

Situated on a spur overlooking Pai-shui, at an elevation of 10,700 feet. The mighty mountain mass Shan-tzu-tou with its glacier which feeds the Pai-shui, overshadows the meadow. Forests of tall spruces (*Picea likiangensis*) surround it. The author camped here for weeks translating Na-khi literature.

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[p.156 E]

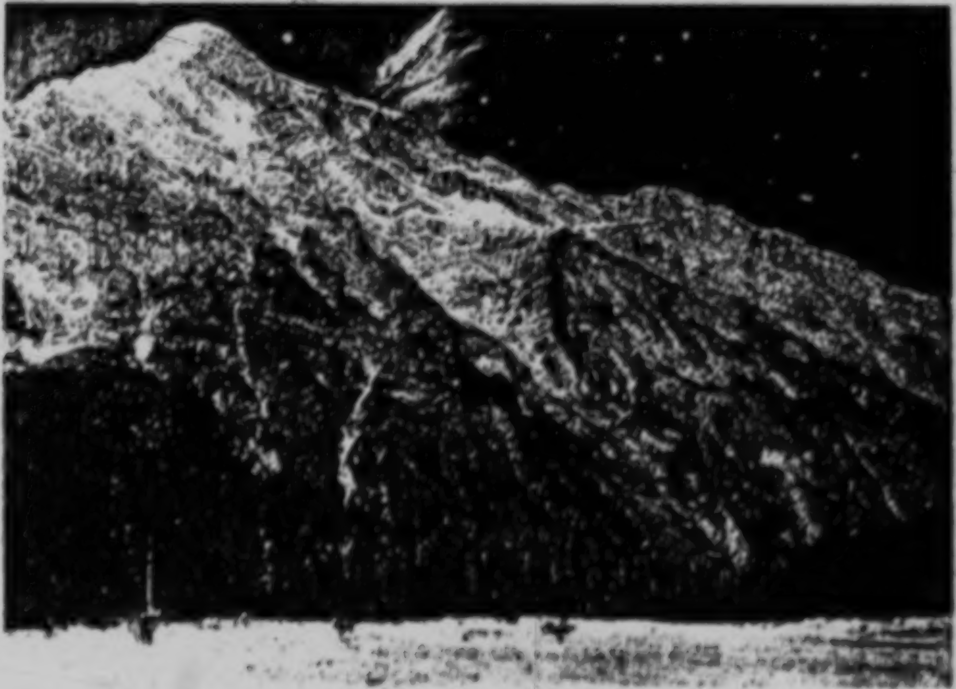

PLATE 85.—THE THIRD HIGHEST PEAK [illegible]

[illegible]

As seen from Nda-an gko, elevation 10,700 feet. Spruce forest near the base of the mountain, firs on the central slopes. In the summer numerous waterfalls descend over the limestone cliffs, while in the winter the snows are blown off the summit ridge.

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[P.156 F]

(Courtesy Nat. Geogr. Soc.)

PLATE 86. — LOOKING SOUTH ALONG THE YÜ-LUNG SHAN

玉 龍 山

The grassy downs extend to Yu-k'o-lo, a gulch at the foot of Gyi-nà nv-lv. The trees are Abies, the only survivors of extensive forests which covered this region. Shan-tau-tou in the distance (left). Gyi-nà nv-lv in immediate background.

2: Rock K-5 (1934-) 1947 AF16 Southwest China AF16

[p.156 G]

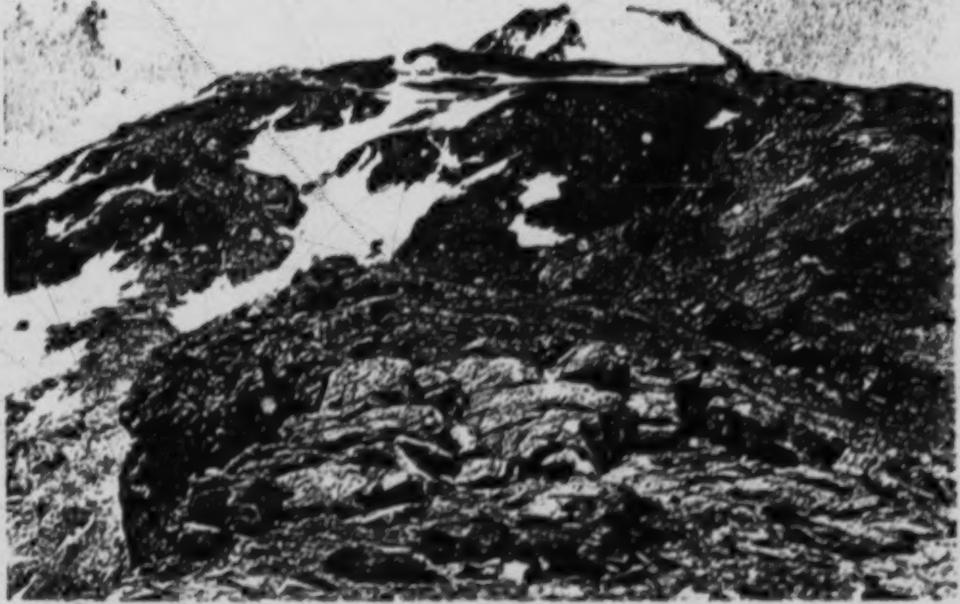

PLATE 87.—ON THE SUMMIT SLOPES OF GYI-NÀ NV-LV

[illegible]

The broad summit ridge is buried in its upper part by a glacier which extends north; many beautiful alpine plants live in the crevices of the limestone rocks. West of the mountain and parallel to it is the 'A-ts'an gko range, see plate 89. Photographed looking south from an elevation of 16,000 feet.

(Courtesy Nat. Geogr. Soc.)

PLATE 60.—THE CONFLUENCE OF THE CHIEN-T'AI HO AND THE YANGTZE NEAR TA-KU

[illegible]

The Chien-t'ai Ho has its source in the glaciers of Mt. Gyi-nah Nv-lo and the 'A-ts'an-gho Range; its greyish-white waters debouch into the Yangtze near Ta-ku.

[p. 156 H]

[p.172 A]

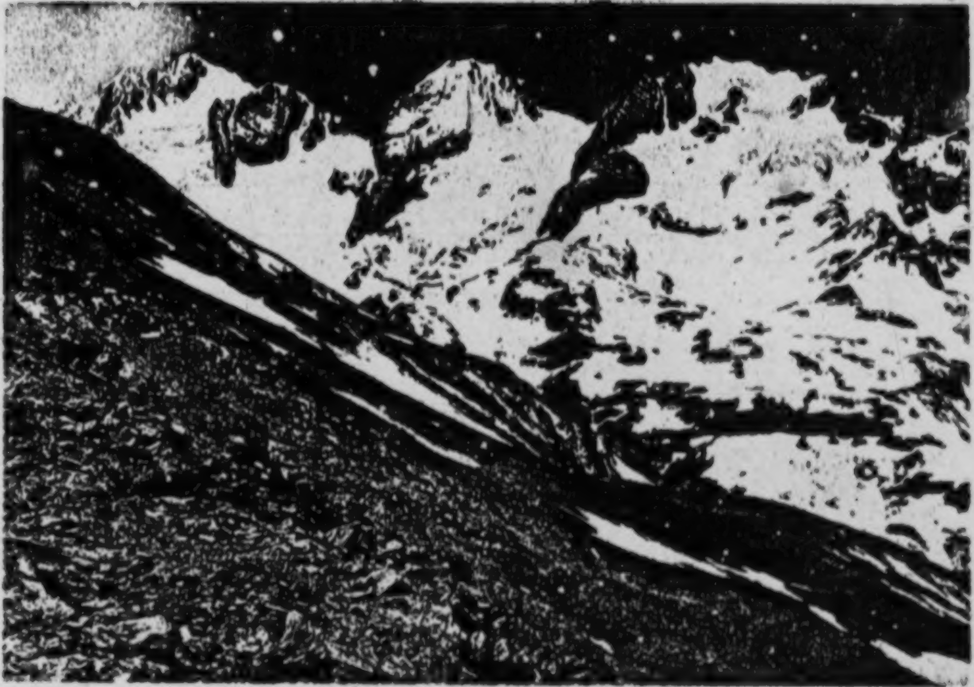

PLATE 89. — THE SOUTHERN PEAKS OF 'A-TS'AN-GKO

木 增 山, 木 公 山, 木 高 山

The first is A-ssu nv-lv or Mù-tseng Shan, it is the second highest peak of the Yü-lung Shan; the second is A-ku nv-lv or Mu-kung Shan; the third A-mbu nv-lv or Mu-kao Shan. In foreground the summit slopes of Gyi-nà nv-lv. The Yangtze flows more than 10,000 feet below the peaks.

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2: Rock K-5 (1934-) 1947 AF16 Southwest China AF16

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2: Rock K-5 (1934-) 1947 AF16 Southwest China AF16

[p.172 B]

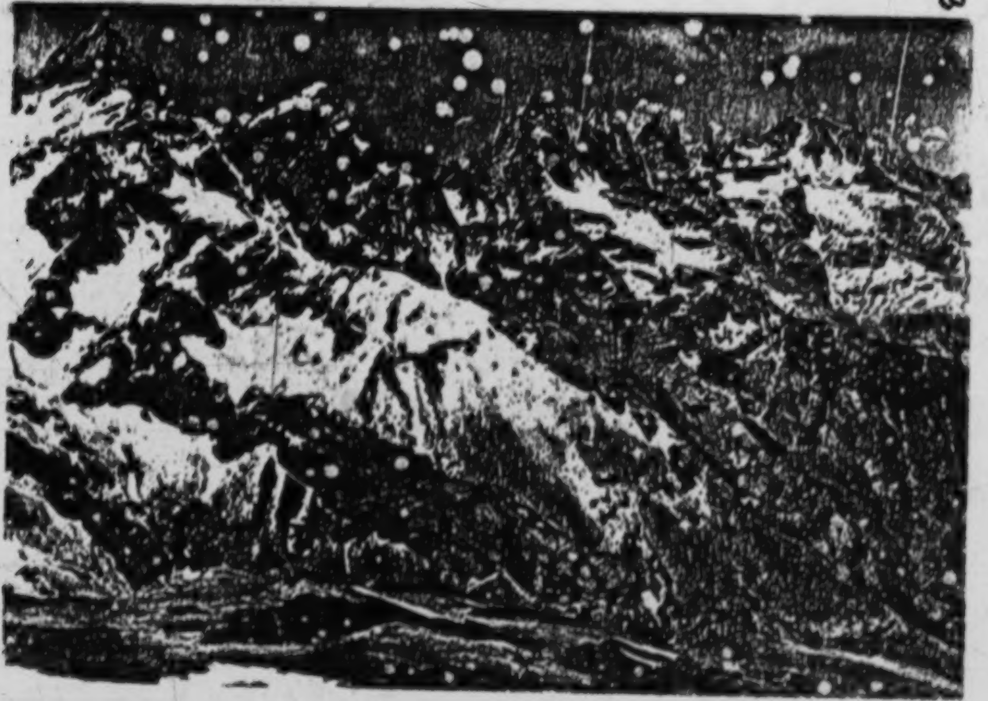

PLATE 90.—THE NORTHERN CRAGS OF 'A-TS'AN-GKO

[illegible] 山 北 [illegible]

The Yangtse flows several thousand feet below these crags, a continuation of the peaks shown on Plate 89. The last broad peak (extreme right), the fourth highest of the Yü-lung Shan is Ha-ba [illegible] nv-lv (Ha-pa Shan 哈巴山); it is separated from the crags by the Yangtse, which here cuts through the snow range and forms the 'A-ts'an-gko gorge. The trees on the slopes are Abies.

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2: Rock K-5 (1934-) 1947 AF16 Southwest China AF1/6

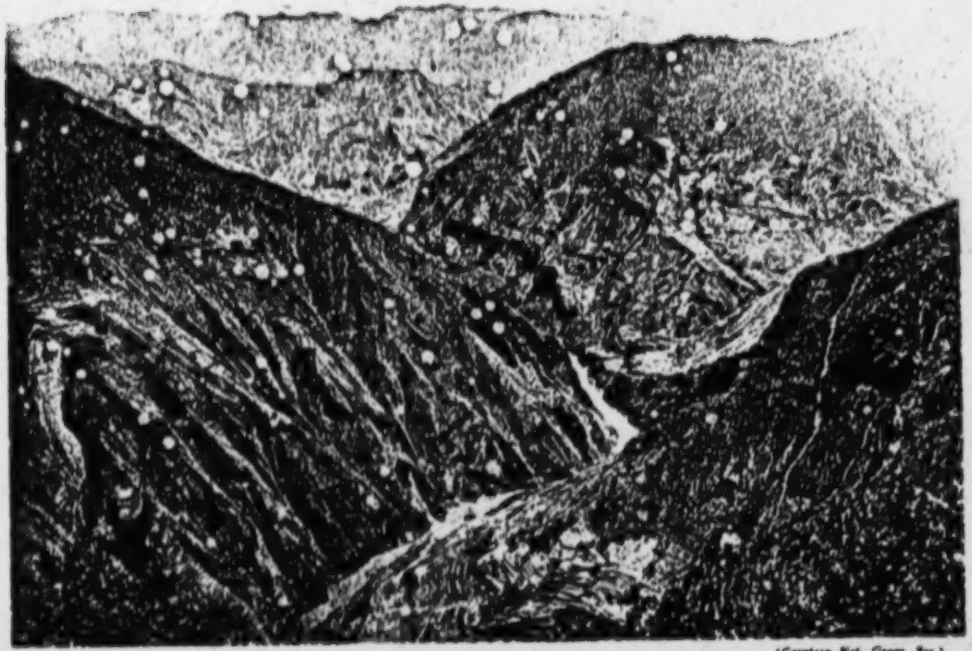
[p.172]

(Courtesy Nat. Geogr. Soc.)

PLATE 98. — MOUNT GYI-NĀ NV-LV AND THE 'A-TS'AN-GKO RANGE

白 茫 雪 山

As seen from near Mba-yi-wua. The broad mountain mass (left) is Gyi-nā nv-lv; the peaks and crags behind form the 'A-ts'an-gko range back of which the Yangtze flows in a gorge more than 10,000 feet deep. Pine forest in foreground. See also Plates 89 and 90.



(Courtesy Nat. Geogr. Soc.)

PLATE 100. — THE YANGTZE AT LA-PAO LOOKING DOWNSTREAM

[illegible]

The river which flows in a magnificent gorge separates La-pao (right) from Yung-ning (left). The village of La-bpu 'A-k'o with its terraced fields is visible in lower center of picture. Photographed from summit of La-bpu mbu 10,200 feet elevation, looking south.

[p.1722]

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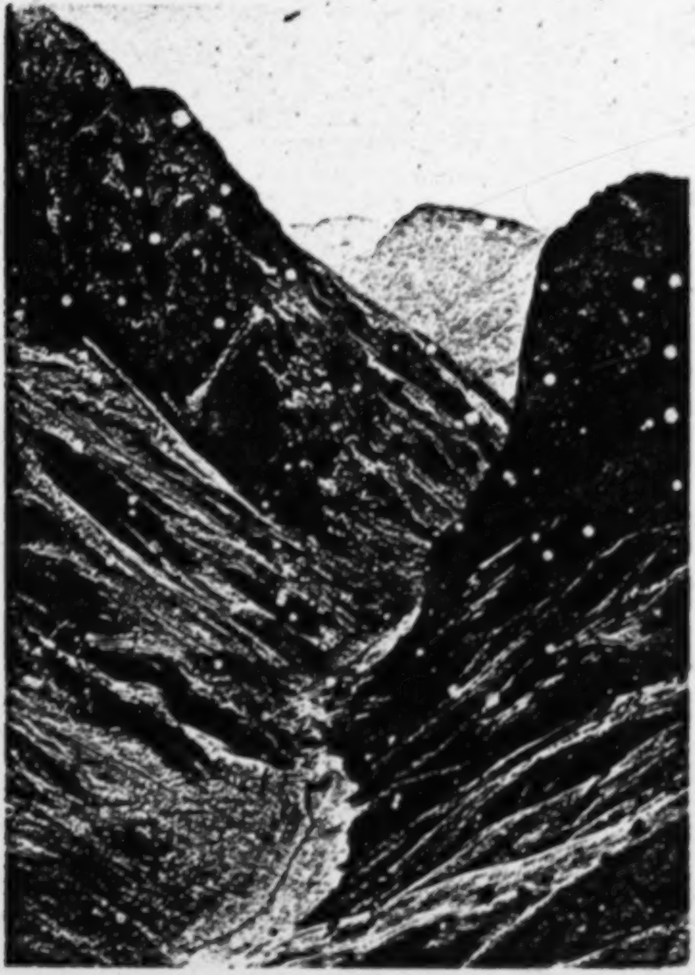

PLATE 103. — THE YANGTZE — GV-HO-GU GORGE

[illegible] 下 [illegible] 金 沙 江 石 門

Beyond the gorge is the district of La-pao where Kublai Khan first fought the Mo-so (Na-khi) December, 1253. He was opposed by them at a pass called Hsieh-shan-men Kuan, west (right) of the Gv-ho-gu gorge. The triangular peak beyond the gorge (center) is La-bpo mbu.

[p. 172-0]

PLATE 104.—IN THE GO-HO-GU YANGTZE GORGE

[illegible]

Pines and oaks cling to the vertical walls forming the Go-ho-gu gorge in which the Yangtze roars several thousand feet below the summit crags. Photographed from a bluff in the Gko-mä ravine, elevation 8,000 feet. The gorge separates the Feng-k'o from the La-pao district.

[p 172 P]

CHAPTER II

1. THE MOUNTAINS OF LI-CHIANG

ACCORDING TO THE *LI-CHIANG FU CHIH LÜEH*

(上 CH. 4, FOLS. 23A–24B)

Wu-lieh Shan 吳烈山 (the Na-khi Ghügh-lä Ngyu) is 15 li east of the city. 842
On this mountain is a temple called Niang-niang Miao 娘娘廟, where barren 778
women come to pray for children. A large figure of Niang-niang sung-tzu 送子 (Matron who brings children) is exhibited there, on which the women throw stones. The goddess Niang-niang is then usually dressed with new clothes by the worshippers. The place is only frequented by Na-khi women still able to bear children.

Tung Shan 東山 [1] (East Mountain) bounds the district of Li-chiang on the 133
east, 20 li from the city. The two mountains (Tung and Wu-lieh Shan) stand side by side, with a saddle between them, and appear as if bowing to the city.

San-t'ai Shan 三台山,[2] also known as Li-chiang An Shan 案山 (Table Mountain) and Nan Shan 南山 (South Mountain), is situated 15 li south of the city. Near it is the hamlet of La-ts'ü-wùa. It is very beautiful and has three prominent peaks of different heights.

Shih-tzu Shan 獅子山 (Lion Mountain) also has the name Huang Shan 黃山 (Yellow Mountain), and in Na-khi it is called Wua-gkv-mbu. It lies one li west of Li-chiang and is the property of the Mu family. Ancient cypresses grow scattered over the hill which is about 100 feet in height and 8,300 feet above sea level. From its summit a beautiful view can be had over Li-chiang and the north-western part of the Li-chiang plain and snow range (PLATES 50 and 54). A road passing over it leads to Chung-tien and Wei-hsi. The former yamen of the Na-khi chiefs lies at its foot, facing east.

Near the top of Shih-tzu Shan, but on the western slope, there is a temple 778
called P'u-te t'an 普得壇,[3] built during the reign of Chao Tsung 昭宗 of the 774

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[1] To this range belongs also an isolated, very sharp, triangular peak, known to the Na-khi as Dto-ma Ngyu; it is thus named on account of its resemblance to a *dto-ma*, (Tibetan, *gtor-ma*). This is an offering to the gods by the Dto-mbas as well as Lamas, in the shape of a pyramid of barley-flour dough mixed with butter. This mountain stands to the north-east of Li-chiang and is a conspicuous landmark. Near it is the village of Gv-dtu and therefore the mountain is often spoken of as Gv-dtu Dto-ma Ngyu, but is also known as Tung-shan Dto-ma Ngyu.

[2] San-t'ai (Three terraces) is the name for the three pairs of stars of the Great Bear, and it is possible that the peaks are called after these stars, though *t'ai* also means eminent, exalted.

[3] The word *t'an* (altar) is equivalent to the Na-khi *d'a*, as in *Muan-bpö d'a* (altar or place in which Heaven is propitiated). The words P'u-te are undoubtedly the same as the Na-khi P'u-dtu, the name of a clan which performs the propitiation of Heaven at a different time from that of the other Na-khi clans, namely, on the 5th day of the first moon. The Chinese P'u-te t'an is thus the same as the Na-khi P'u-dtu d'a (altar of the P'u-dtu). The above mentioned

774 T'ang dynasty (889–904). Annually in the first moon the peasants of the 778 sub-districts of Ta-yen li, Pai-ma li, La-sha li and La-p'iao li repaired to that temple to worship the spirits of the mountains, rivers, earth and grain.

133 *Hsiang Shan* 象山 (Elephant Mountain), called in Na-khi, Gyi-wùa Ngyu, named after the village of Gyi-wua situated to the north of the Lung-wang Miao 龍王廟 (Dragon king Temple), is three li north of the city, and resembles a reclining elephant. It is therefore also called the Hsiang-mien Shan 象眠山 (Sleeping elephant Mountain); the city is situated at its southern 312 point. There are several springs called Hsiang ch'üan 象泉 (Elephant springs) at its foot which are the source of the Yü Ho 玉河 (Jade Stream) The Ngu-lu gyi of the Na-khi; these springs are five li north-west of Li-chiang and are also the source of the Yang-kung Chiang 漾工江 of Ho-ch'ing.

133 *Chih Shan* 芝山 is called in Na-khi, Khyu-t'o-llü Ngyu, from the monastery Khyu-t'o-llü which is situated on its slope (PLATE 64). Its ancient name was Chieh-t'o-lin 解脫林. This mountain is to the south of the snow range and is part of its southern spur. One of its summits is called Tzu-kai-feng 紫蓋峯, and another Chao-yang-kang 朝陽岡, while a certain cliff has the name of Shih-tzu ngai 獅子巖 (Lion cliff). The easiest approach to the mountain is from Pai-sha (Boa-shi), south-west of which it is situated. It lies between the village of Shu-ho 束河 and Pai-sha and adjoins the mountain on which Huang-shan shao 黃山哨 is located. At its foot nestles the hamlet of A-chung-wùa. In the possession of the Mu family is a work on this mountain called *Chih-shan yün-kuo-chi* 芝山雲過集, written in 1628 by the most famous of all the Na-khi chiefs, Mu Sheng-pai 木生白. A copy of this work is in my library.

Among the maze of hills which compose Chih Shan is the lamasery Fu-kuo Ssu 福國寺,[4] which possesses an abbot's reception hall. To the left of the lamasery is a spring called Pai-lu ch'üan 白鹿泉 (White deer spring) and a pond called Han-yüeh Hu 涵月湖 (Submerged moon pond), also a cliff called Pei-tou ngai 北斗巖 (Dipper cliff) and a hill called Tan-feng-luan 丹鳳巒 (Phœnix peak). To the right there is a mountain rim called Tan-hsia-wu 丹霞塢 (Red cloud embankment), a hill called Yü-yin-feng 玉印峯 (Jade seal hill), and a pond called Lao-t'an 老潭 (Old pool). In front of the lamasery there is a mountain called Ts'ui-po Shan 翠柏山 (Green cypress Mountain). All this is engraved on a memorial stone, written by the Ho-ch'ing magistrate, Chang Hsüeh-mou 張學懋.[5]

[E33] *Ma-tso-shu Shan* 馬左豎山 is 30 li south of Li-chiang. The Na-khi pasture their cattle on this mountain.

San-pi-wai-lung Shan 珊碧外龍山 is the famous Wen-pi Shan 文筆山, a triangular peak 15 li west of Li-chiang. It is the Sä-bpi zhĕr nv-lv of the Na-

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P'u-te t'an has been abandoned as a place of worship, as each village has its own *d'a*. It is possible that the members of the P'u-dtu clan are the descendants of the original inhabitants of the region, namely the P'u tribe, who adopted the Na-khi custom of propitiating Heaven.

[4] The name was given to the lamasery by the Ming Emperor Hsi Tsung (1621–1627).

[5] This memorial stone is built into the wall immediately beyond the main entrance to the temple. It is dated the seventh year of Ming T'ien-ch'i (1627) and gives the name of every hill, cliff and grotto.

khi. The mountain is well known to the Tibetans, who call it Zhi-dag mug-po, 133 written gzhi-bdag-smug-po [in Na-khi Shi-zhi muan-bbu]; (in the Tibetan classic of the mountain god Dra-lha [dgra-lha] the mountain is called Jang-ri-mug-po [ljang-ri-smug-po ལྗང་རི་སྨུག་པོ], *i.e.*, the purple mountain of Jang = Mo-so); another Na-khi name for it is Sä-bpi a-na Ngyu. On this mountain [137] grows a bamboo from which the Na-khi (used to) cut their arrows. On its slopes there was once a temple called Ling-shou Ssu 靈壽寺, built by the Mu family [411] during the Ming dynasty. In the fourth year of Ch'ien-lung (1739), a lama, known as the Ssu-pao la-ma 四寶喇嘛, came with a retinue to pay his respects 778 to the prefect of Li-chiang, called Kuan Hsüeh-hsüan 管學宣. He induced him to subscribe funds and to have the priest, Ming Chü 明具, and others solicit funds for the building of the Wen-feng Yüan 文峯院 lamasery, or Wen-feng Wan as it is called in Yün-nan, situated on the slopes of the mountain.

Meng-hsi Shan 蒙喜山 is 50 li north-west of Li-chiang; at its foot was the 133 A-khi (A-hsi 阿喜) guard-house at the A-khi ferry across the Yangtze. The [505] mountain is terraced and is several ten li long, resembling a screen.

A-na Shan 阿那山 [6] is 270 li north of Li-chiang, on the southern border of the ancient Pao-shan chou 寶山州. This is the still more ancient Hsieh-lung 邪龍, so known during the Han dyansty (206 B.C.–A.D. 24), and in the present district of La-pao 剌寶 (La-bpu). On this mountain was an ancient stockaded village called A-na-ho 阿那和.

Lao-chün Shan 老君山 [7] is 250 li south-west of Li-chiang and rises high into the clouds; its height is 14,100 feet. It is north-west of the town of Chien-ch'uan, and is reckoned as the father of all the mountains of Yün-nan. A [312] powerful spring issues from it. It is believed that Lao-tzu 老子 once prepared the magic drug of immortality on this mountain — hence the name.

Wang-chiang Shan 望江山 is 80 li south-west of Li-chiang. The Shih-ku 石鼓 Ch'ung-chiang Ho 衝江河 [8] flows between Lao-chün Shan and Wang-chiang Shan, the latter being south of Shih-ku.

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[6] There is also a mountain, or rather spur, west of the village of Dü-gkv (at the head of the Li-chiang plain), which is called 'A-na-gkv.

[7] This mountain is also called Lo-chün Shan 羅均山 and La-chün Shan 剌均山. The *Yün-nan T'ung-chih*, ch. 22, fol. 5b, quotes these as synonyms for Lao-chün Shan. It also states that Lo-chün Shan 羅均山 is 20 li north-west of the old Lan chou district. Its ancient name is La-kou Shan 剌鉤山. The second character is apparently a misprint and should be *chün* 均. Five deep ponds are on its summit, and the natives pasture their yak on the mountain, hence it is also called Mu-niu Shan 牧牛山. It lies 250 li south-west of Li-chiang. On Lao-chün Shan is a *ling-ch'üan* 靈泉 (mysterious spring); as the water flows down the mountain it is called Lao-chün Ho 老君河, another name for it being Shih-lai Chiang 石賴江. From the eastern slopes issues the source of the Chien Hu 劍湖 (Chien-ch'uan Lake) — this being merely a tributary of the Yang-pi Chiang. The *Yün-nan T'ung-chih* states that both waters flow into the Chien-ch'uan Lake. This is, of course, not so for they flow into the Yang-pi, and the Chien-ch'uan Lake has an outlet into the Yang-pi south of Chien-ch'uan.

[8] It is also written Ch'ung Chiang 沖江. The stretch from where it flows west to east is called La-pa Ho 拉巴河 (La-ba gyi in Na-khi), as one branch of it has its source in the La-ba Ngyu (La-ba-gko Mountains), called in Chinese La-pa Shan 拉巴山, west of Shih-ku. In Na-khi the mountain is called La-ba Ngyu after the village of La-ba, the Chinese Shih-ku.

2: Rock K-5 (1934-) 1947 AF16 Southwest China AF16

● 133 *Hsüeh-p'an Shan* 雪盤山 (Snow basin Mountain) is situated 200 li south-west of Li-chiang, and 10 li west from the ancient Lan chou. It has 12 separate peaks, and snow remains throughout the four seasons [there are, however, no glaciers on the mountain, which is 14,000 feet in height].

[211] The Hsüeh-p'an Shan is now better known as the Yen-lu Shan 鹽路山 (Salt road Mountain), as all the salt from the La-chi-ming 喇雞鳴 wells is brought over this mountain to Chien-ch'uan, etc. On the latest Yün-nan military map, published in 1928, the Hsüeh-p'an Shan extends east of Lan-p'ing 蘭坪 for about 120 li, about 50 li north of Lan-p'ing and 70 li south, making a curve. In the same range is a mountain marked Fu-yüan Shan 福源山, extending somewhat north-east. I believe that this mountain is identical with the peaks known as Yen-lu Shan, and is the central part of the Hsüeh-p'an Shan.

How accurate Chinese geographical accounts are as to distances can be judged from the following statement found in the *Li-chiang fu chih lüeh*, Vol. I, ch. 4, fol. [illegible]3b: "The Hsüeh-p'an Shan is 200 li south-west of the city of Li-chiang, and 10 li west of the ancient Lan chou [present Lan-p'ing]"; On p. 35a, it states that "the ancient Lan chou is 360 li south-west of the city of Li-chiang." We have here a difference of 160 li; furthermore the Hsüeh-p'an Shan is not west, but east of Lan-p'ing. By stating it is 10 li distant from Lan chou, one would expect a definite mountain and not a range about 120 li long. There is a high mountain mass just about 20 li east of Lan-p'ing, and that is the Yen-lu Shan (Handel-Mazzetti's Ye-lu-schan). I crossed that mountain three times and know whereof I speak.

About the Fu-yüan Shan the same source states that it is 250 li west of Li-chiang, yet this mountain is in the center of the Hsüeh-p'an Shan. Again, the *Yün-nan T'ung-chih* says that the Yen-lu Shan is south of the Hsüeh-p'an Shan and reaches to the border of Yün-lung. On its southern slopes rises the Ta-lang Ho 大浪河, which flows south-west into the Pi Chiang 沘江. [This is the river which flows past Yün-lung and is marked as the Lo-ma Ho on Major Davies' map.]

Fu-yüan Shan 福源山 (Lucky spring Mountain) is 250 li west of Li-chiang and at the north border of Lan-p'ing. The mountain extends south-east over 50 li.

Hua-ma Shan 花馬山 (Piebald horse Mountain) is 350 li north-west of Li-chiang and near the south-east border of the ancient Chü-chin chou 巨津州, the present Chü-tien. On one of the cliffs is a rock resembling a piebald horse, whence the name. In ancient days the people of the Mo-so chao called their country the Hua-ma Kuo 花馬國 after that mountain. (*See* History of Li-chiang, p. 95.)

Han-sou Shan 漢藪山 is 500 li west of Li-chiang and close to the Shu-miao 樹苗汛 guard-house, north-west of the ancient Chü-chin chou. It is a spur or branch of the Lao-chün Shan. On its summit are three lakes, each five *mou* wide, or a little less than an English acre, and of unknown depth. [This mountain is south of present-day Lu-tien 魯甸.]

Feng-lo Ta-shan 鳳羅大山 is over 700 li west of Li-chiang; it forms the western valley wall of the Mekong or Lan-ts'ang Chiang 瀾滄江, and extends to

Pao-shan 保山 (Yung-ch'ang 永昌), forming the divide between the Nu-tzu 怒子 [9] and the Mekong.

Ko-lo Shan [illegible]落山 is 420 li west of Li-chiang and forms the eastern valley wall of the Mekong, west of the present Lan-p'ing. It is composed of two parallel mountains, each with three distinct peaks overlooking the Mekong.

Nu-kuan Shan 怒關山 is 190 li west of the Li-chiang district. From its slopes rises the T'ung-tien Ho 通甸河. [The T'ung-tien Ho is the southernmost branch of the Yang-kung Chiang 漾工江.] It flows past T'ung-tien, and debouches into the Mekong at Sha-tien 沙甸. [This place is south of Shu-miao 樹苗, which is the Li-chiang — Wei-hsi border.]

Shih-ho Shan 十和山 is 20 li north-west of Li-chiang. At its foot is a village called Shih-ho-ts'un 十和村. [This is in the sub-district of Shu-ho; Na-khi: Shwua-wùa.]

La-pa Shan (Na-khi: La-ba Ngyu) is 160 li west-north-west of Li-chiang. It is also called Feng-shui-ling 分水嶺. The Shih-ku Stream (Na-khi: Pa-tzu gyi, or La-ba pa-tzu gyi) has its source on the eastern slopes and flows at Shih-ku into the Yangtze. Handel-Mazzetti calls this mountain "Lo-tue schan." This is a mistake and his informer evidently had Lao-chün Shan in mind, which is also called Lo-chün Shan.

2. JADE DRAGON MOUNTAIN, OR YÜ-LUNG SHAN 玉龍山
THE LI-CHIANG SNOW RANGE (PLATE 54)

This beautiful mountain range, consisting of three main peaks, extends from north to south; in its northern part it is cut through by the Yangtze, which separates the third peak (Ha-ba ndshĕr nv-lv) from the two southern peaks. The gorge which divides the range is known as 'A-ts'aŋ gko and is described elsewhere (pp. 256–282).[10]

The southernmost is the highest peak and dominates the Li-chiang plain. It is known as Shan-tzu-tou 扇子陡, for its fluted face, the outspread snow ridges below the summit resemble an opened fan held upright. Shan-tzu-tou is 19,800 feet high.

The second peak, but not the second highest of the mountain mass of which it is a part, is commonly called Gyi-nà lo-gkv (H.-M., Dyinaloko) which really means "Inside the black water valley." It may be better described as Gyi-nà nv-lv (Black water snow peak); [the literal translation of *nv-lv* is silver rocks, by which the Na-khi denote a snow peak.] This peak differs greatly from the highest one of the range, and is somewhat further east than Shan-tzu-tou, and not west as on Handel-Mazzetti's map.

West, and parallel to the broad mountain mass of Gyi-nà nv-lv, but connected at the very top by a spur from which a deep valley extends north, is a

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[9] The Nu-tzu (Lu-tzu 潞子), are a tribe inhabiting the upper Salween in Yün-nan territory, hence the Salween — Mekong divide is meant.

[10] The Yü-lung Shan is also called Sung Hsüeh-shan 嵩雪山 (Lofty Snow mountain), and Fa Hsüeh-ling 乏雪嶺 (Peerless Snow peak).

133 range of ice-crowned peaks exactly like those of Shan-tzu-tou. The last of these peaks at the head of the valley is higher than Gyi-nà nv-lv, hitherto considered the second highest peak of the Jade-dragon mountain. It is of about the same height as Shan-tzu-tou. This parallel range is often spoken of by the Na-khi as 'A-ts'an-gho nv-lv (Snow peaks of 'A-ts'an-gho), and I have adopted the name for the ice-crowned peaks, the southernmost of which is the second highest, with Gyi-nà nv-lv third, and Ha-ba ndshĕr nv-lv fourth of the Li-chiang snow range.

There are many snow peaks in the extreme north-west of Yün-nan, some of which are higher than the Li-chiang range and like the latter they also extend from north to south. Directly north of Li-chiang, in the new province of Hsi-k'ang 西康, is a large snow range called Gangs-dkar Rigs-gsum-mgon-po (pronounced Gangkar risum gompo), (Plate 55), also known as the Gangkar-ling (Gangs-dkar-gling) snow range (Kung-ka-ling Hsüeh-Shan 貢噶嶺雪山 in Chinese). (Plates 55, 56, 57, 58, 59). It is composed of three isolated peaks which rise from a high plateau and form a triangle,[11] but they extend from west to east, and are directly north of the Yangtze loop. The river Zho Chhu (Iron River; Wu-liang Ho 無量河 of the Chinese) flows at the foot of the range and debouches into the Yangtze at the apex of the loop (Plate 105). The entire Gangkar-ling range and the Zho Chhu were once under the rule of the Na-khi chiefs, in particular during the Wan-li period of the Ming dynasty (1573–1619). There are extensive Na-khi villages, collectively called O-yü, the inhabitants of which are descendants of the Na-khi soldiers who once guarded the region.

There is one other range not marked on any map, and that is Mu-ti Gangkar (Mu-ti Gangs-dkar)[12] which lies east of the Ya-lung 雅礱 in Hsi-k'ang. It is about 10,000 feet in height and glacier-crowned; the western face of the mountain is in Mu-li 木里 (Mi-li in Hsi-fan, Mä-ü in Na-khi) territory; it also extends from north to south, with the Ya-lung flowing at its foot, in a gorge 11,500 feet deep, and 1,300 feet higher than the Yangtze.

361 133 Still farther north is the Mi-nyag Gangs-dkar[13] (Minya Konka as I baptized it) (Plate 60). It is north-east of the Mu-ti Gangkar range and south-west of Ta-chien-lu 打箭爐, in Hsi-k'ang. Although Na-khi are supposed to live near Ta-chien-lu, in all my travels in that region I have not come across any of their villages. The farthest north are those on the Tibetan side north of Yar-kha-lo and in Mu-li territory near the Yün-nan border. These will be described in their respective places.

133 The Li-chiang Records state that besides being called the Yü-lung Shan, the Li-chiang snow range is also called Hsüeh-ling 雪嶺 and is covered with eternal snow, visible for a hundred li or more. Half-way up the mountain is said to be a pond, but the only pond known to me on this snow range is at the foot of the last and southernmost crag, called Hua-lä-bpu (H-M., Ŭnlupe).

[11] The three peaks are named after the Lamaist trimurti Rigs-gsum mgon-po རིགས་གསུམ་མགོན་པོ (The Three Lords), defenders of Lamaism, *i.e.*, Chenrezig (Spyan-ras-gzigs), Jambyang (Hjam-dbyangs) and Chhana-dorje (Phyag-na-rdo-rje).

[12] མུ་ཏི་གངས་དཀར

[13] མི་ཉག་གངས་དཀར

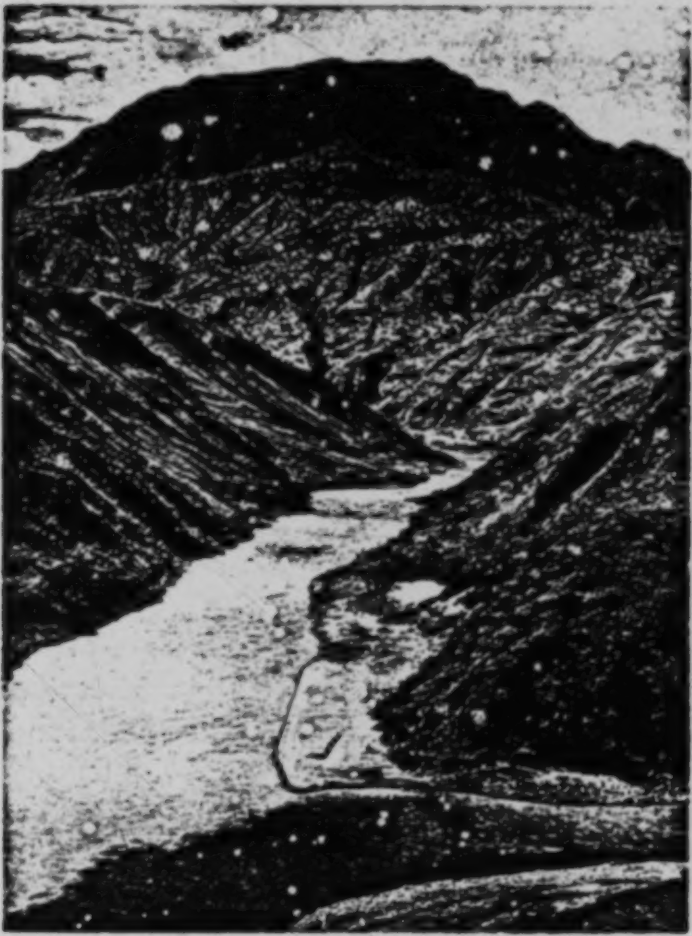


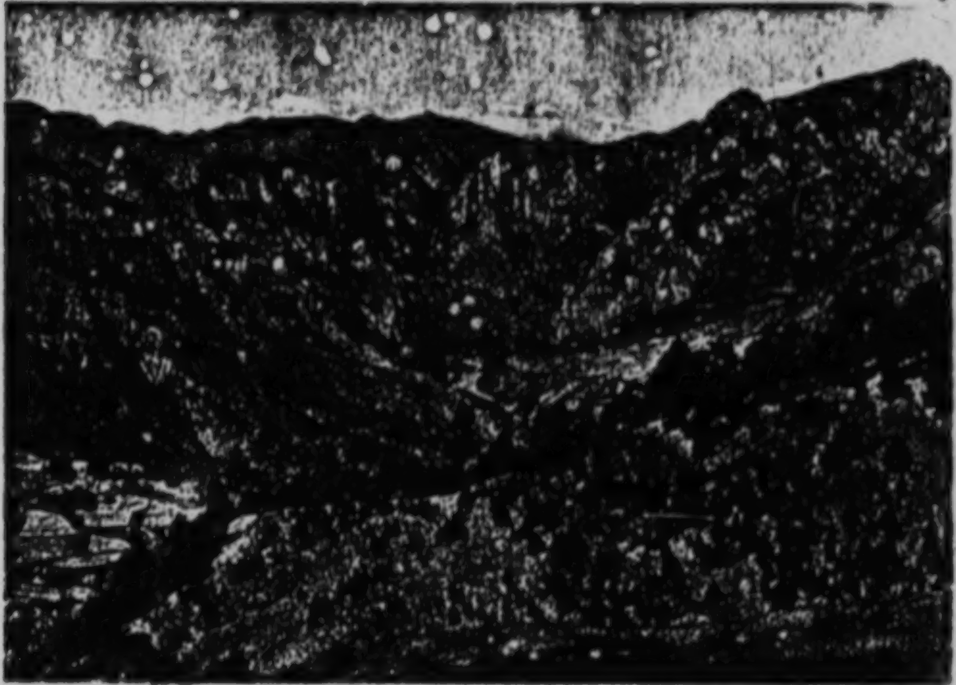
PLATE 105. — THE CONFLUENCE OF THE YANGTZE AND THE ZHO CHHU

金 沙 江 與 無 量 河 合 流

The Zho Chhu or Wu-liang Ho enters the Yangtze at the apex of the loop. Li-chiang, Yung-ning and Chung-tien territories meet here.

[p. 188 A]

[p.188 B]



(Courtesy Nat. Geogr. Soc.)

PLATE 106.—THE WESTERN ARM OF THE YANGTSE LOOP

金 沙 江 西 支 彎 曲

The Yangtse makes two sharp bends ere reaching the apex near Shang Feng-k'o. Photographed from the central spur elevation 9,400 feet. Pines cover the hillsides.

21 Rock K-5 (1934-)1947 AF16 Southwest China AF16

[p. 188c]

(Courtesy Nat. Geog. Soc.)

PLATE 107. — THE EASTERN ARM OF THE YANGTZE LOOP

[illegible]

The river flows here in a deep gorge which separates Li-chiang from Yung-ning territory. The bend seen in the picture is north of Feng-k'o. The high mountain in the distance is Wua-ha over 15,000 feet in height. Photographed from an elevation 10,100 feet. Pines in foreground.

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[P. 188 D]

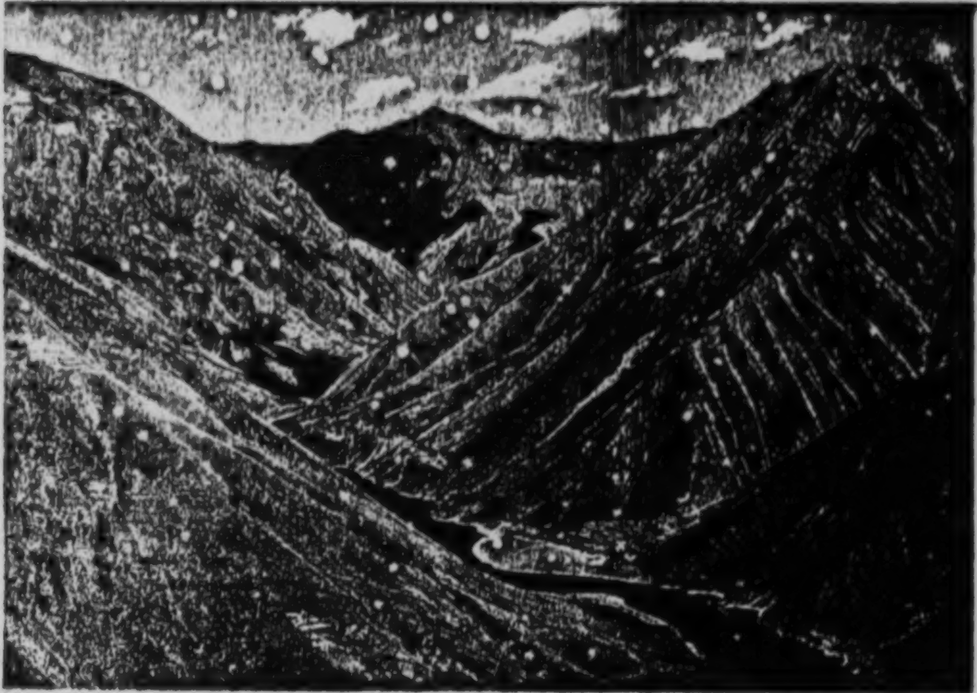
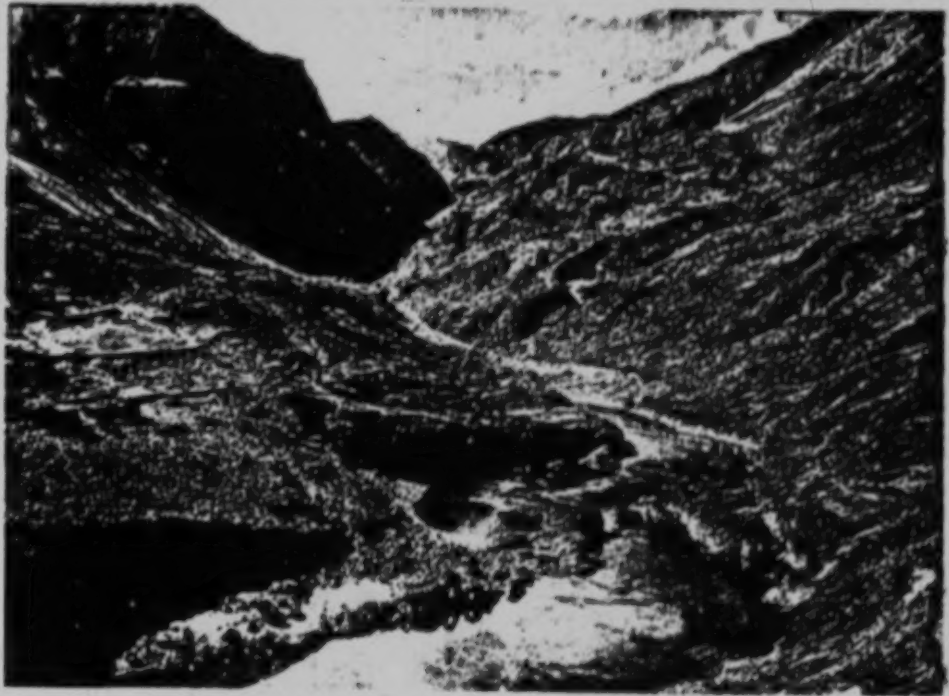


PLATE 108. — THE YANGTZE NEAR P'A-LO

金 沙 江 近 巴 羅

The river (looking upstream) flows here in an arid gorge; the Li-su hamlet of P'a-lo (Chinese Pa-lo), also called Tse-mi, can be seen on the steep slopes above the alluvial fan, about center of picture. Left is Li-chiang, right, Yung-ning territory. Photographed from a bluff elevation 6,800 feet.

[p. 188 E]



(Courtesy Nat. Geogr. Soc.)

PLATE 109.—THE YANGTZE AT CHIANG-WAI

江 外 渡 口

This arid gorge is dreary and a waste of rock and grass. A ferry plies here between Bu-yi-gkv in Yung-ning and Chiang-wai (Da-dü-gku) in Li-chiang territory (left). The latter village can be seen on the slopes (left margin of picture). La-bpu mbu whence Plate 100 was taken is beyond the gorge, about center (left) of picture.

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(Courtesy Nat. Geogr. Soc.)

PLATE 110. — THE ONLY BRIDGE ACROSS THE YANGTZE

[illegible] [illegible] 江 [illegible] [illegible]

The Chin-lung ch'iao (Golden dragon bridge) spans the Yangtze at Tsu-li-chiang. The village above the bridge is called Chin-lung-ch'iao-ts'un or Gku-k'o-ndu in Na-khi. The mountains on the other side of the river are in Yung-sheng (Yung-pei) territory.

[p. 188 F]

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2: Rock K-5 (1934-) 1947 AF16 Southwest China AF16

[p.188 H]

(Courtesy Nat. Geogr. Soc.)

PLATE 113.—GRAW-NGAW LAKE

[illegible] [illegible] 子

The lake, situated at the southwestern end of the Yü-lung Shan, has a subterranean outlet. In the summer the meadows surrounding it are a blaze of color. It is the home of *Primula Vialii* and many other lovely flowers. Pines in foreground. Elevation of lake 10,300 feet.

[p. 188 K]

PLATE 115.—THE YANGTZE AT GOÔ-LO

The river is here considerably broad; at the foot of the mountain mass, overshadowed by the snowpeak Ha-ba ndshěr nv-lv, the Yangtse makes a sharp bend to the right and cuts through the Yü-lung Shan.

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[p.188 M]

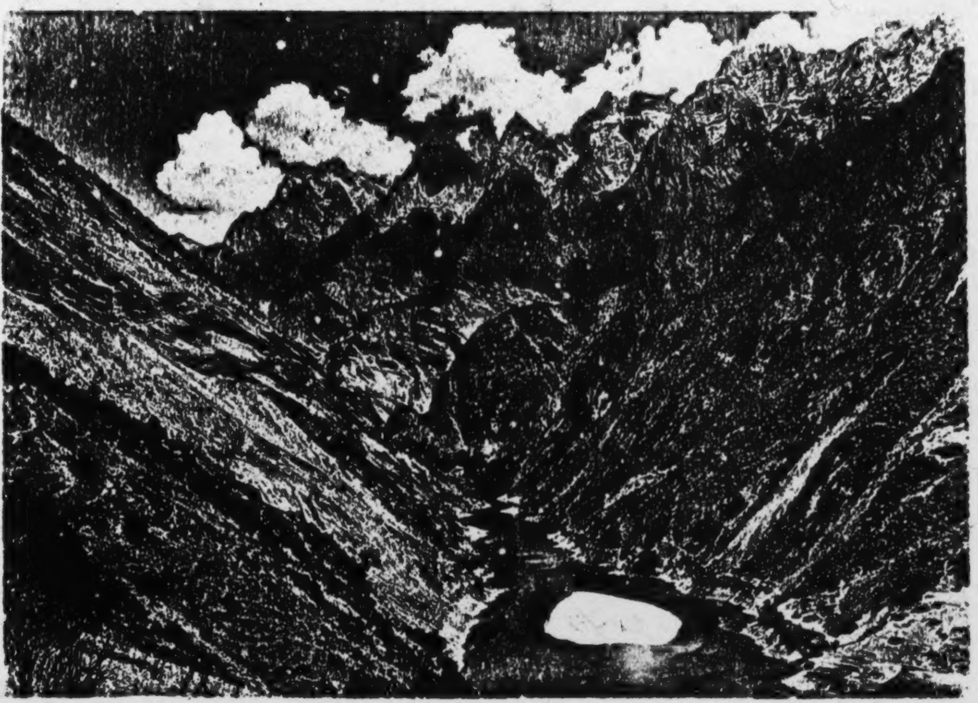

PLATE 117. — THE ENTRANCE TO 'A-TS'AN-GKO GORGE

金沙江入玉龍山峽隘

The Yangtze entering the 'A-ts'an-gko gorge which it has carved for itself through the Yü-lung Shan. Left, Chung-tien; right, Li-chiang territory. In the winter, the dry season, sand islands appear in the riverbed. Photographed from a terrace south of La-tsa-ku, Chung-tien district.

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2: Rock. K-5 (1934-) 1947 AF16 Southwest China AF16

[p.188 N]

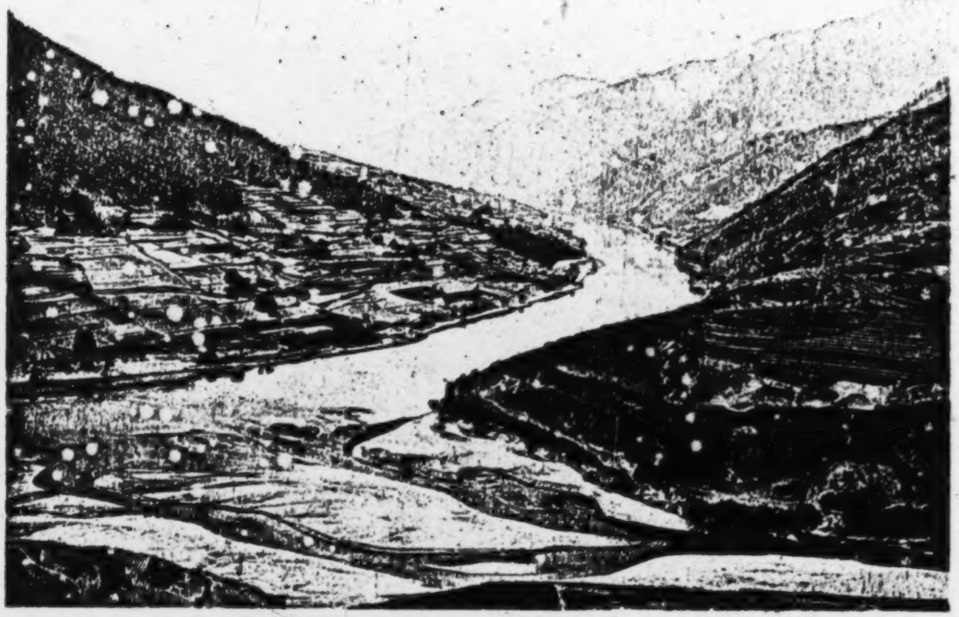

PLATE 118. — CONFLUENCE OF THE CHUNG-CHIANG HO AND YANGTZE

金沙江與中江河合流

The Chung-chiang Ho or Yü-ndo gyi descends from the highlands of Chung-tien and debouches into the Yangtze where the latter enters the great 'A-ts'an-gko gorge. Looking south, upstream; Li-chiang territory left, Chung-tien territory right.

2: Rock K-5 (1934-) 1947 AF16 Southwest China AF16

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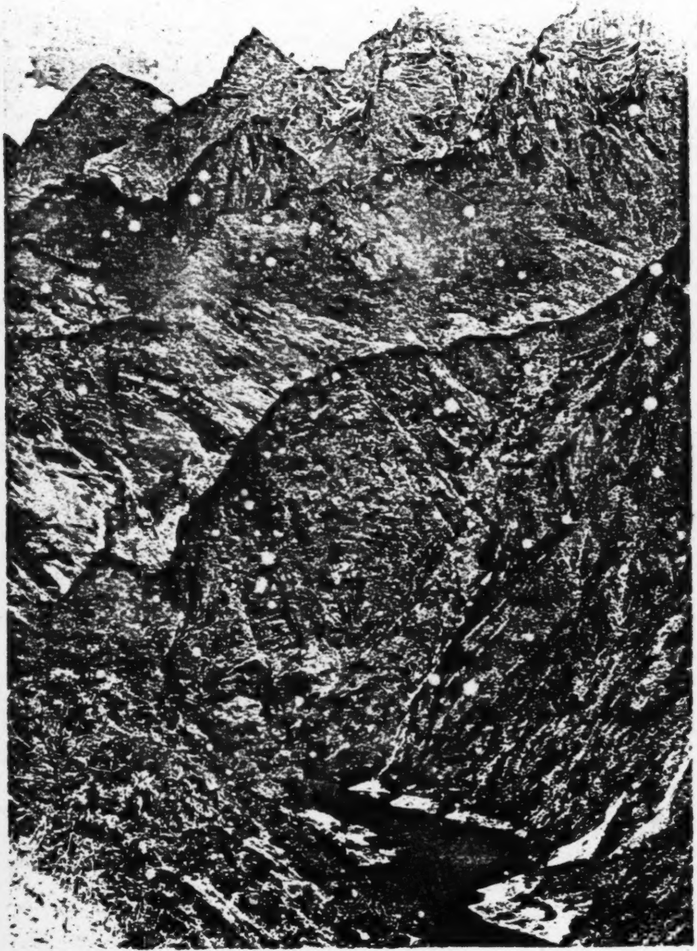

PLATE 119.—THE YANGTZE IN THE 'A-TS'AN-GKO GORGE NEAR NO-YÜ

金沙江玉龍山峽谷內

The river flows placidly at the foot of stupendous limestone cliffs opposite No-yü. In the deep lateral ravine called Muan-gko-hsi a few Li-su families eke out a precarious existence.

[p. 188 O]

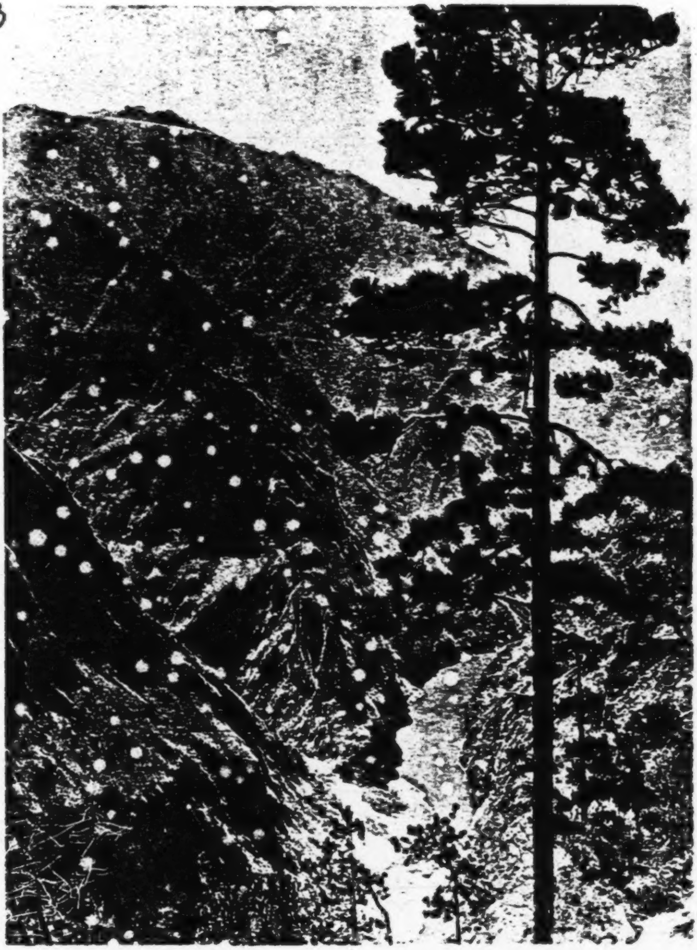

PLATE 120. — THE YANGTZE IN THE 'A-TS'AṈ-GKO GORGE

[illegible]

Looking south-west, back towards the entrance of the gorge from a lateral spur or bluff, 8,000 feet elevation. Pines in foreground.

[p 188 P]

133 This pond, which only exists in the summer, is called Tsu-k'aw-khü; when it is full it descends as a waterfall over a vertical cliff several hundred feet high, the water having cut a terrific, narrow channel in the rock. This waterfall is called 'A-nggü-t'an̲ (Floor of the split cliff).

The name Yü-lung Shan was first mentioned by Pauthier in *L'Universe* (*Chine*) in 1837,[14] and appears on the Chinese maps and in Chinese geographies as well as in the Li-chiang Records. The following appears in the *Tu-shih Fang-yü chih-yao*, ch. 113, fols. 15a–16b.

"The Yü-lung Shan is situated 20 li north-west of the military and civil prefecture of Li-chiang. It is also known as Sung hsüeh-shan 崧雪山 (Lofty snow mountain) and commonly as Hsüeh-shan. The entire range extends for about 100 li, and about ten high peaks rise to the skies. It looks down on the Li Shui 麗水 (Beautiful River) [Yangtze]. The snow which accumulates during the summer never melts. Its cliffs rise to the height of 10,000 jen 仞 [one *jen* = 8 feet]. If one looks at it from beyond 1,000 li, it seems as near as the distance between a foot of eight and a foot of ten inches. It is connected with the mountains of Sung chou 松州 of Ssu-ch'uan." [15]

The Meng family 蒙氏 (of the Nan-chao Kingdom) bestowed the name of Pei-yo 北嶽 (North sacred Mountain) upon it, and also called it Hsüeh-ling 雪嶺.

133 175 During the reign of T'ang Te Tsung, period Cheng-yüan (785–804) Wei Kao agreed with Yün-nan to attack jointly the T'u-fan (Tibetans) and drove them beyond Yün-ling 雲嶺, that is beyond the Hsüeh-ling (Li-chiang snow range).

In the beginning of the Yüan Chih-shun 元至順 (1330) period, one of the rulers of Yün-nan, T'u-chien 禿堅,[16] and others rebelled against the Mongol

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[14] On p. 7 of his work a list is given of all the snow mountains of China, which is headed by Yün-nan. The fifth mountain mentioned is the Li-chiang snow range, and he states: "Siuë chan (montagne de neige) ou Yu-loung-chan, 26° 33'–97°. Cette montagne colossale est visible à une distance très-considérable; elle est couronnée par plusieurs glaciers élevés."

[15] This is the present day Sung-pan hsien 松潘縣 in the extreme north-west of Ssu-ch'uan, It is, of course, not connected with the mountains of that district, unless one considers all mountains to be so connected.

[16] The *Tien-yün li-nien chuan*, ch. 5, fols. 55a–57a, states: "History relates that T'u-chien and the Wan-hu 萬戶 (Rulers of 10,000 families) Po-hu 伯忽 and A-ho 阿禾 rebelled and attacked Chung-ch'ing Lu 中慶路, (the circuit of Chung-ch'ing = Yün-nan fu), and killed the secretary of the judicial commissioner, whereupon he called himself King of Yün-nan. This happened in the third moon of the 1st year of the period Chih-shun of Yüan Wen Tsung 元文宗." The *Hsin Yüan Shih* 新元史, ch. 22, fol. 1a, says that T'u-chien rebelled in the first moon of the spring *ting-ssu* 丁巳 of the 1st year of the period Chih-shun (January 24th, 1330); he made himself King of Yün-nan in the second moon *chia-wu* 甲午 (March 2nd, 1330). Po-hu became the Ch'eng-hsiang 丞相 (Assistant minister) and A-ho became the P'ing-chang 平章 (Minister of State). In the fifth moon the Yün-nan Hsüan-wei-shih 宣慰使, Lu-yü 祿余 [he was the native official of Wu-meng 烏蒙, the present Chao-t'ung hsien 昭通縣 in north-east Yün-nan], rebelled and joined T'u-chien.

"History further relates that Lu-yü acquired merit by killing T'u-chien. He thereupon was made Hsing-sheng ts'an-chih-cheng ssu 行省參知政事.

"The Lo-lo and all the savages who had joined T'u-chien started rebellions everywhere and the P'ing-chang T'ieh-mu-erh Pu-hua 帖木兒不花 [grandson of Kublai] met his death.

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dynasty, and the Ssu-ch'uan army was ordered to punish them. In the defiles of the Hsüeh-shan they defeated the army of the Lo-lo-ssu 羅羅斯.[17] According to the *Tien-chih* 滇志, I-mou-hsün proclaimed himself Jih-tung Wang 日東王 (King of the Orient) in the fourth year of T'ang Cheng-yüan (788) and under pretext bestowed titles on five mountains, and four rivers. The eastern one, or Tung-yo, is called Chiang-yün-lu Sung-wai Lung Shan 江雲露松外龍山 and is situated 280 li north-east of the chou (department) of Lu-ch'üan 祿勸州 in the prefecture of Wu-ting 武定府, adjoining the border of Tung-ch'uan fu 東川府, Ssu-ch'uan (now Hui-tse 會澤 in Yün-nan); it is also called Wu-meng Shan 烏蒙山, Yün-lung Shan 雲龍山 and Chiang-yün-lu Shan 絳雲露山.[18] The northern part of this range overlooks the Yangtze. Its twelve great steep peaks, extend for more than 70 li. In the twentieth year of T'ang Cheng-kuan (546) the military governor of Sui chou 嶲州, Liu Po-ying 劉伯英, said that the various Man beyond Sung, i.e., Sung-wai, only temporarily submitted and later revolted again. He petitioned the government to attack them in order to open the road to Hsi-erh Ho 西洱河 (Ta-li Lake) and India. This he was permitted to do. The following year the government sent Liang Chien-fang 梁建方 to mobilize the army of the 12 chou of Shu (Ssu-ch'uan) and punish the various Man of Sung-wai. Over 100,000 barbarians were killed and captured. Thereupon the various Man, severely frightened, dispersed to live in the valleys of the mountains. An envoy was then sent to Hsi-erh Ho, who, by proclamation, ordered the native leaders to submit. The chief Meng-yü 蒙羽 of Sung-wai was also ordered to pay tribute to the T'ang dynasty.

Afterwards T'u-chien's younger brother Pi-la-tu-mi-shih 必剌都迷失 and his whole family drowned themselves in the Lake (Yün-nan fu Lake). Two more of his younger brothers and his three sons were captured and executed while Lu-yü fled and all the rest were pacified."

[17] The Lo-lo-ssu were the aborigines ruled by a native chief who lived one li east of Chien-ch'ang 建昌, the present Hsi-ch'ang 西昌 in Ssu-ch'uan. The *T'u-i k'ao* 土夷考 says that during the period Yüan Chih-cheng (1341–1367) there was established the Hsüan-wei-ssu Tu-yüan-shuai-fu 宣慰司都元帥府 of the Lo-lo, the Meng-ch'ing 蒙慶 and of other places. They and their chief dispersed and lived to the west of the Ta-tu Ho 大渡河. The grandson of the Lo-lo-ssu Hsüan-wei-ssu, An-p'u-pu 安普卜 by name, submitted with all his people in the fourth year of Hung-wu (1371). He was given the title of T'u-chi-hui-shih 土指揮使 and ordered to administer the affairs of the military station of Chien-ch'ang (wei). He was, however, given neither letters patent nor a seal. He controlled territory 15 horse-stages in extent and ruled nine tribes, viz.: P'o-jen 僰人, Lo-lo 猓玀, Pai-i 白彝, Hsi-fan 西番, Mo-so 麽些, Lu-lu 猺獞, Mongols, Mohammedans and Yü-jen 漁人. The Lo-lo were the most refractory and all these tribes scattered to the mountain valleys. The territory extended for more than 1,000 li each way; north to the Ta-tu Ho, south to the Yangtze, east to Wu-meng (Chao-t'ung), and west to Yen-ching 鹽井, the present Yen-yüan hsien 鹽源縣. The grandson six generations after him died without issue and the tribes all rebelled. The stronger lorded it over the weaker, and feuds caused constant murder, until all was quiet again after a long lapse of time.

[18] The *Tung-ch'uan fu chih*, ch. 4, fol. 5a, states that the mountain is 200 li south-west of the city of Tung-ch'uan, and is also called Yün-lung Shan 雲弄山. From Hsün-tien 尋甸 and Ch'e-hu 車湖 a branch extends 300 li as far as San-chiang-k'ou 三江口. Much snow remains on the mountain, hence it is called snow mountain. It is also called Wu-lung Shan 烏龍山. This name appeared first in the western Han dynasty. In the T'ang dynasty it was called Chiang-yün-lu Shan. Now it is known as Wu-lung-hsüeh-shan 五龍雪山. It is very steep and imposing, its 12 peaks extending through the clouds. On its summit is a lake called Hui-niao Hu 惠鳥湖.

The South mountain, or Nan-yo 南嶽, is called Meng-lo Shan 蒙樂山 and 133 is situated 80 li north of the prefectural city of Ching-tung 景東府. It is also known as Wu-liang Shan 無量山. The West mountain, or Hsi-yo, is the Kao-li-kung Shan 高黎共山, and the North mountain, or Pei-yo, is the Yü-lung Shan. The Central mountain, or Chung-yo, is the Tien-ts'ang Shan 點蒼山 west of Ta-li. Although the east and south mountains are not very important, yet they are quite the largest in their respective districts.

The *Li-chiang fu chih lüeh* confirms that in the middle of the reign of Cheng-yüan (794) Wei Kao made an agreement with the Nan-chao Kingdom to attack the T'u-fan and drove them from the Hsüeh-ling, *i.e.*, snow mountain. The army of the Lo-lo-ssu was defeated at the snow mountain by the troops of Ssu-ch'uan at the beginning of the period Chih-shun (1330) of the Yüan dynasty. This snow mountain is none other than that of Li-chiang. A branch of it extends south, and this is the Ts'ui-wei Shan 翠微山. Still further lies the Sleeping elephant Mountain or Hsiang-mien Shan 象眠山 at the foot of which the Lung-wang Miao is situated. This branch ends at Yü-ho-ts'un 玉河村.

3. THE MOUNTAIN GOD AND THE TEMPLE OF SA-DDO

Nearly every snow peak in Tibet has a name, it is usually that of a spirit or 103 deity belonging to the protective type which deity is often believed to dwell within the peak. The Li-chiang snow range does not seem to have any other but Chinese names, which would indicate and confirm the belief that the Na-khi were immigrants in that region. The many Na-khi names which the various alpine meadows, forests, etc., on the slopes of the snow range bear, were given by Na-khi shepherds who were obliged to move their flocks of sheep from one little meadow to another. The shepherds are mostly children, directed by their parents as where to pasture their flocks, and this necessitates names for these places. But proper Na-khi names in the true sense of the word for the range or individual peaks do not exist.

The name of the highest peak is a Chinese one, though it is true that it is also called in Na-khi, Boa-shi nv-lv. *Nv-lv* means silver rock, hence snow mountain, and Boa-shi is the Na-khi name for the market-place Pai-sha-kai situated between Li-chiang and the last village, Nv-lv-k'ö, on the north-western branch of the plain, at the foot of the range. But the name is only a few hundred years old and relates to an episode when the Boa (Hsi-fan 西番), from the north, invaded Na-khi territory and were killed (*shi* = dead) there by the Na-khi.

However, the Li-chiang snow range does represent a spirit or deity, and the deity in this case is not a local one, but one which had its origin in the far north, the grass-lands of Eastern Tibet whence the Na-khi migrated south during the latter part of the Han dynasty. Thus the name of Sa-ddo, the Tibetan Sa-tham, was brought by the Na-khi to Li-chiang and applied in all probability first to the Li-chiang snow range, or rather the spirit of Sa-ddo was made the mountain god and protector of the Na-khi settlers. Only later as the town of Li-chiang came into being was the name Sa-tham extended to it.[19] We see

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[19] It must be stated, however, that according to Sir Charles Bell and his Lhasa informant, Ge-sar is said to have lived during the reign of the Tibetan King To-to-ri nyen-tsen in the

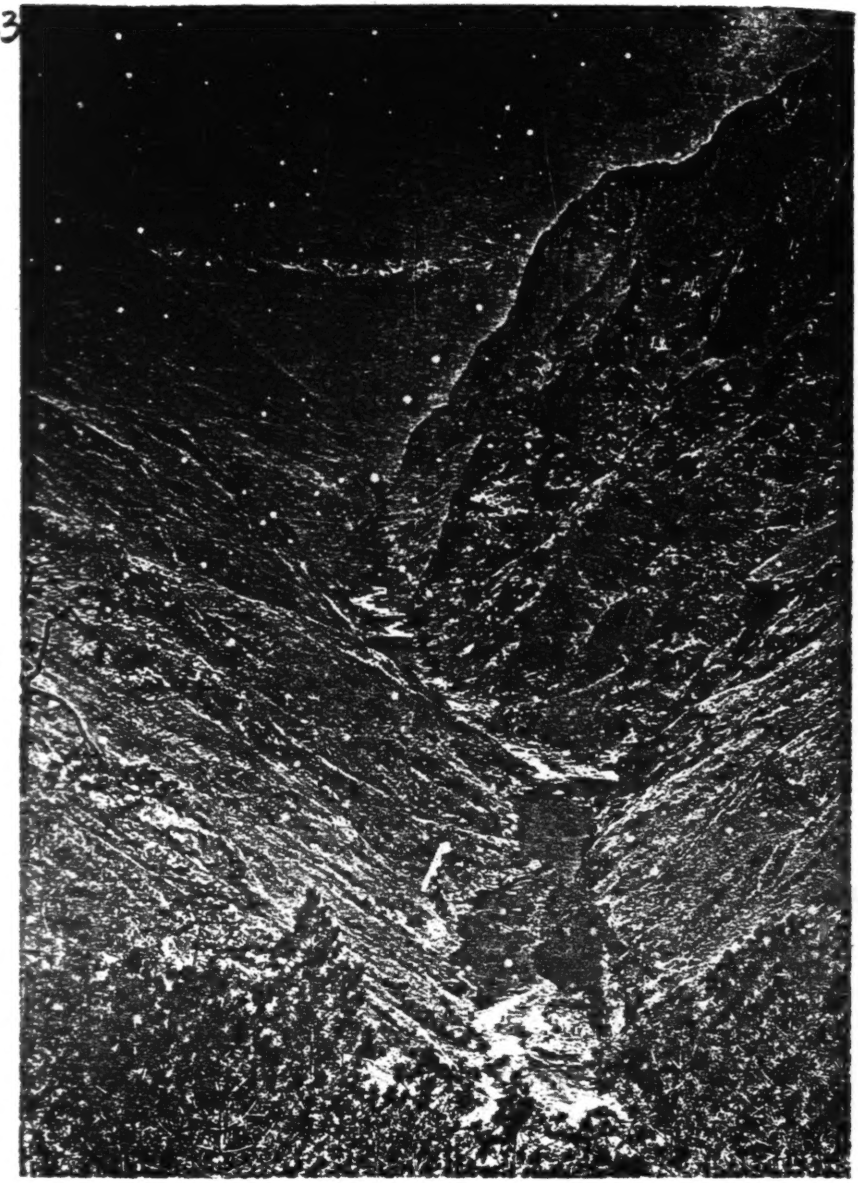

PLATE 121. — THE CENTRAL PART OF THE 'A-TS'AN-GKO GORGE

[illegible] 昌 角 峽 [illegible]

Looking north-east, downstrèam, from a bluff 8,000 feet elevation whence plate 120 was taken. There are in all 34 rapids in the gorge. The Yangtze strikes the snow-capped range Dzu-ku nv-lv (visible in center of picture), and flows north. Pines in foreground.

[p. 220 A]

2: Rock K-5 (1934-) 1947 AF16 Southwest China AF16

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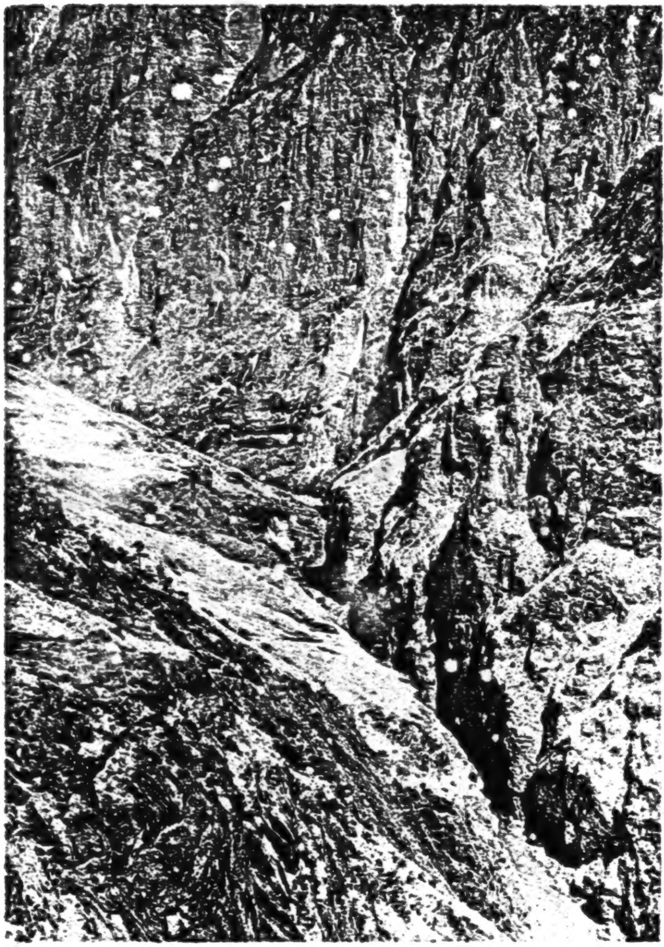

PLATE 123.—THE YANGTZE IN THE CENTRAL PART OF THE 'A-TS'AŅ-GKO GORGE

雞 昌 角 金 沙 江

The river is a narrow blue-green ribbon only a few yards wide, but very deep. The famous Hu-t'iao-t'an or Tiger-leap rapid is visible in the center of the picture. Photographed (with front-lens removed) from a lateral spur elevation 8,350 feet

[p. 220C]

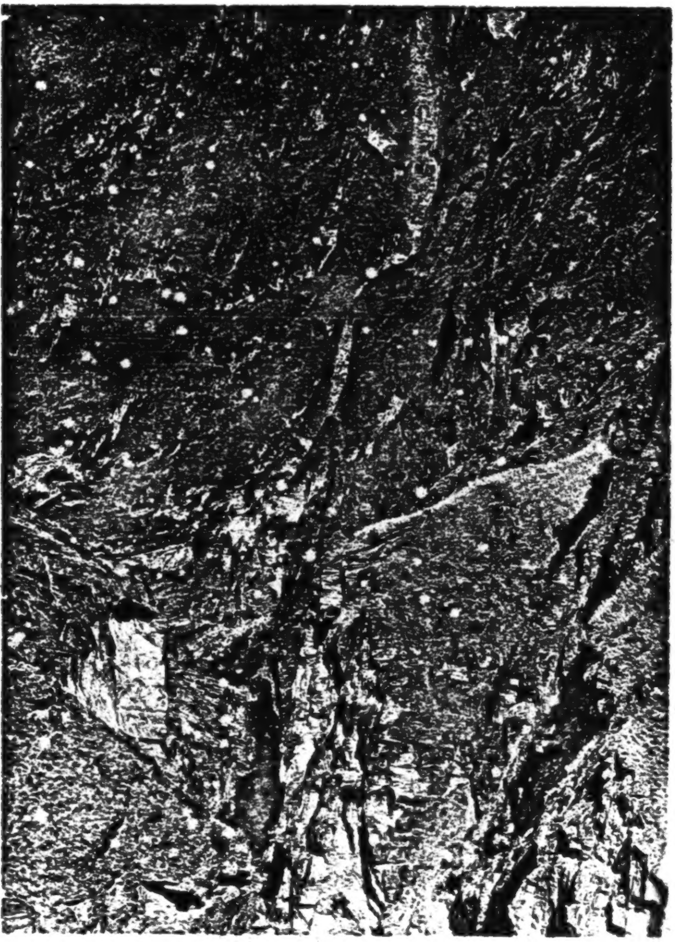

PLATE 124. — THE CELEBRATED HU-T'IAO-T'AN OR TIGER-LEAP RAPID

金 沙 江 虎 跳 灘

The narrowest part of the Yangtze in the entire 'A-ts'an-gko gorge. It is so narrow that a tiger could jump from wall to wall, hence the name. The rock is old limestone.

[p. 220 D]

PLATE 125.—THE YANGTZE IN THE 'A-TS'AN-GKO GORGE LOOKING UPSTREAM FROM NEAR THE HU-T'IAO-T'AN

[illegible]

In this stretch, the river is one succession of rapids; in the summer or early spring, the volume of water is immense and tons of water are thrown up into the air at every rapid.

[p. 220 E]

2: Rock K-5 (1934-) 1947 AF16 Southwest China AF16

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PLATE 126. — THE PINNACLED LIMESTONE WALL OF THE YANGTZE GORGE OPPOSITE TA-SHEN-KOU

[illegible] 昌 角 峽 岩 大 深 溝 對 面

The right bank of the Yangtze is hemmed in by the vertical cliffs of the 'A-ts'an-gko gorge.

[p.220F]

Plate 127.—The End of the Trail in the 'A-ts'an-gko Gorge

寒 坡 嶺 山 口

The gap called Han-p'o-ling is at an elevation of 10,000 feet; there is a sheer drop of over 4,000 feet to the Yangtze. Rhododendrons and pines cling to the vertical wall of rock.

[p. 220G]

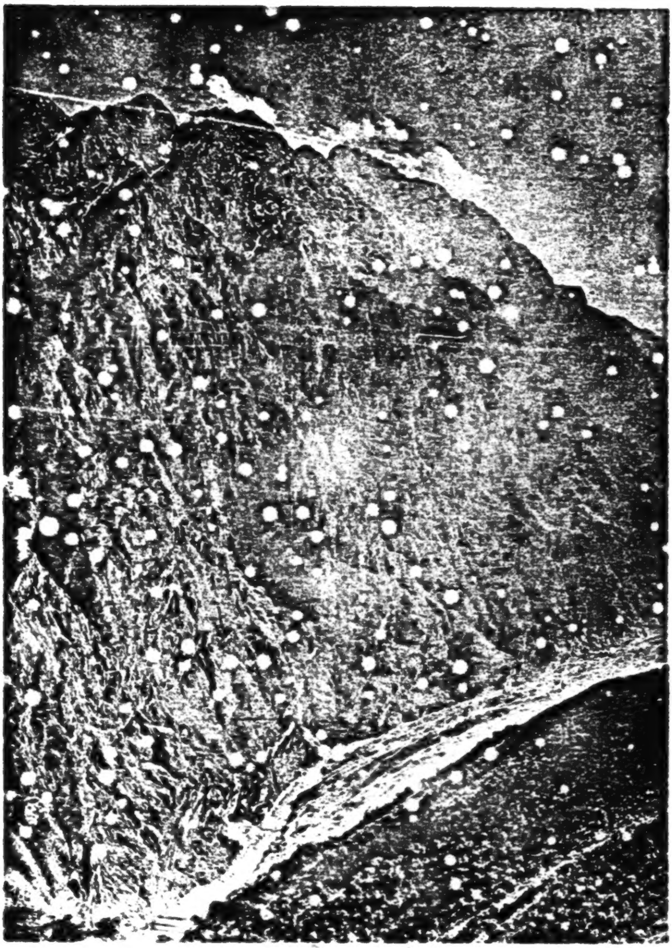

PLATE 128. — VIEW INTO THE 'A-TS'AN-GKO GORGE

[illegible]昌角金沙江峽景

From near the Han-p'o-ling gap the Yangtze, roaring 4,000 feet below, appears as a small stream, a solid wall of limestone rock rises thousands of feet vertically from the Li-chiang side of the river.

[p.220H]

PLATE 129. — THE YANGTZE IN THE TA-KU PLAIN

金沙江流入打鼓壩

After emerging from the 'A-ts'an-gko gorge the Yangtze flows across the conglomerate plain at Ta-ku. Photographed a little north of Han-p'o-ling gap, elevation 10,000 feet. The village of Ta-ku is on the terrace upper right. Pines in foreground.

[p. 220-I]

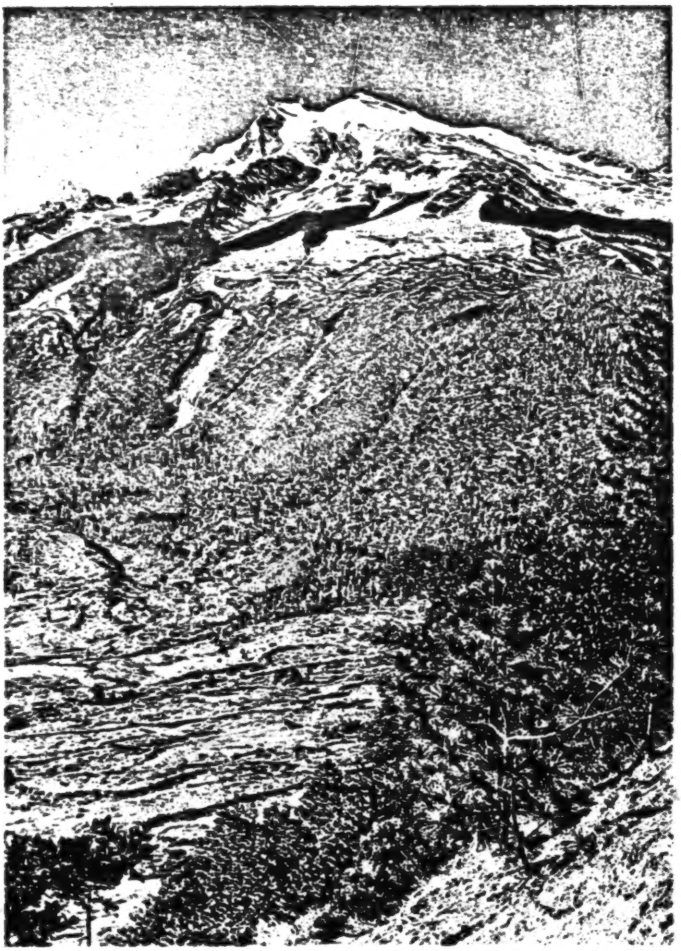

PLATE 131.—HA-BA NDSHĚR NV-LV, THE FOURTH HIGHEST PEAK OF THE YÜ-LUNG SHAN

哈 巴 大 雪 山

As seen from a spur called Wa-'a mbu in the Ha-ba district, elevation 9,250 feet. The peak is 18,700 feet in height.

[p. 220 K]

2: Rock K-5 (1934-) 1947 AF16 Southwest China

Sino-Tibetan Border People AF16 AE3

[p.220-0]

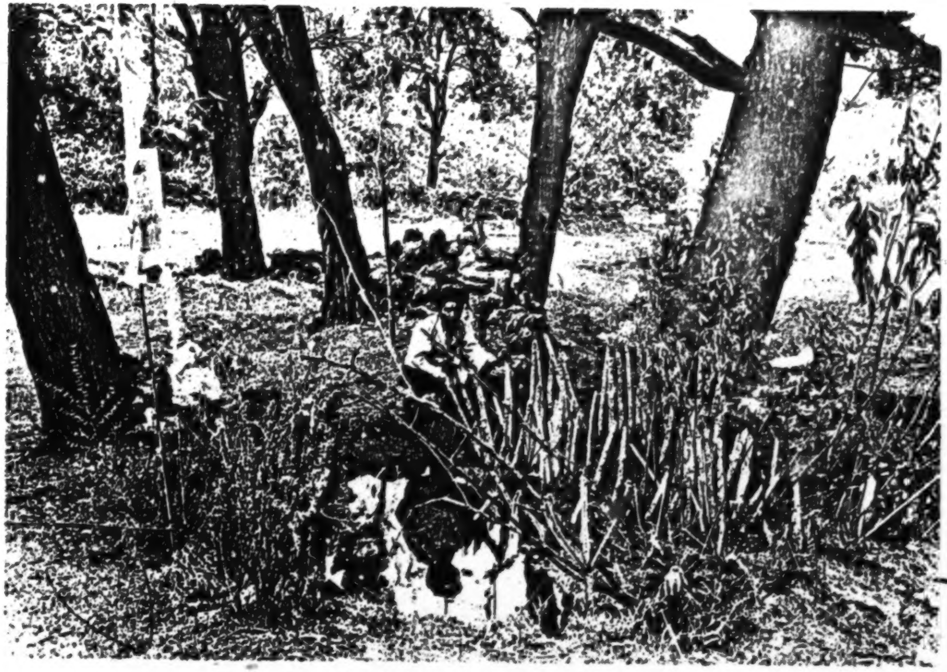

PLATE 135. — THE MYSTERIOUS SACRED SPRING AT BBĚR-P'ĚR-DTĚR

北 地 聖 泉

The spring is situated at an elevation of 8,650 feet in the center of a hill. The Bbĕr-p'ĕr-dtĕr sinter terraces owe their origin to this carbonate of lime-bearing spring. The white wooden rods surrounding the spring are *k'o-byu* on which are painted various *Llü-mun* or Nāga, serpent spirits, whom the dto-mba propitiate.

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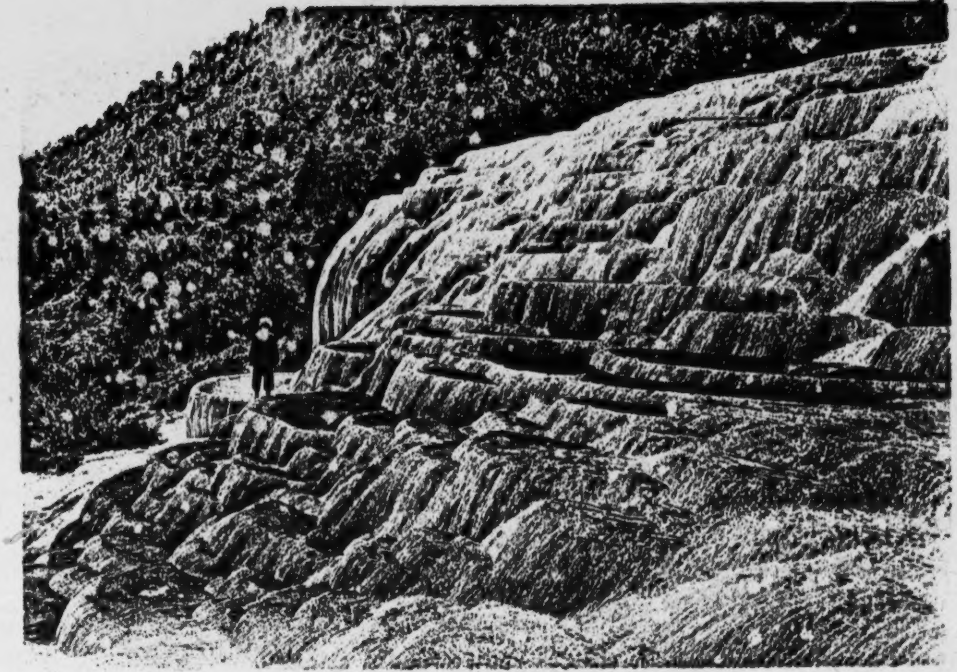

PLATE 136.—THE SINTER TERRACES OF BBĔR-P'ĔR-DTĔR

北 地 泉 華 臺

The carbonate of lime-bearing waters of the spring shown on plate 135, have built these marvelous terraces and basins. They are composed of thousands of thin layers of carbonate of lime deposited by the water which flows noiselessly over them. The entire terrace, where covered by the water, is of a rich cream color.

[p.220 P]

2; Rock K-5 (1934-) 1947 AF16 Southwest China AF16

133

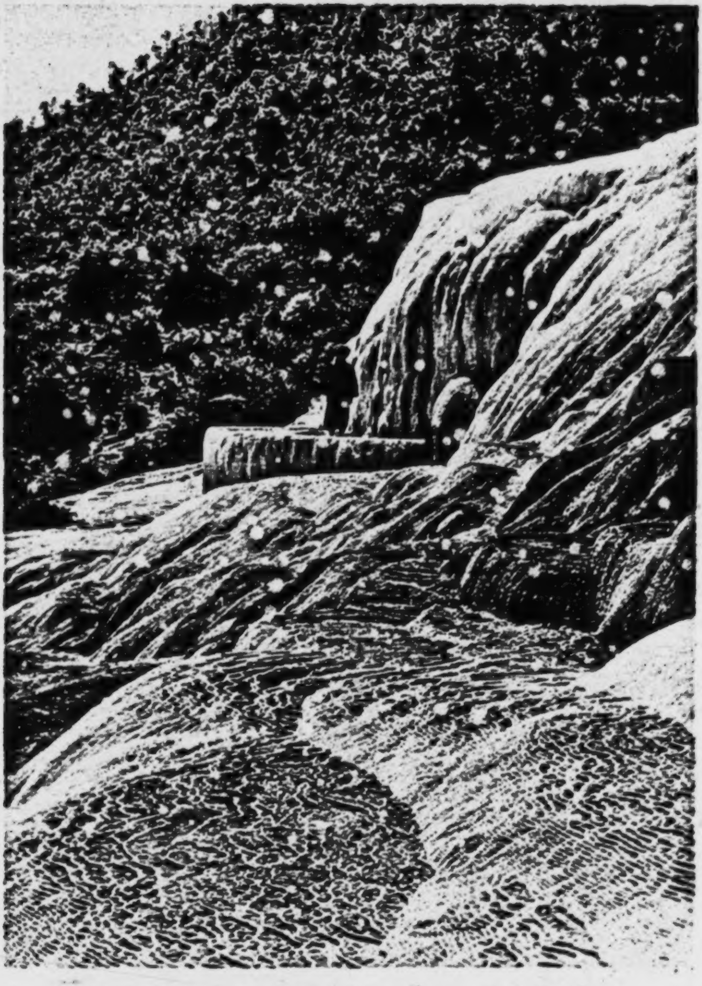

Plate 137. — The Sinter Cascades and Basins of Bbêr-p'êr-dtêr

[illegible]

Stalagmites and stalagtites are formed here. Every ripple and wavelet leaves its cast behind, forever building.

[p. 244A]

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[p.244 B]

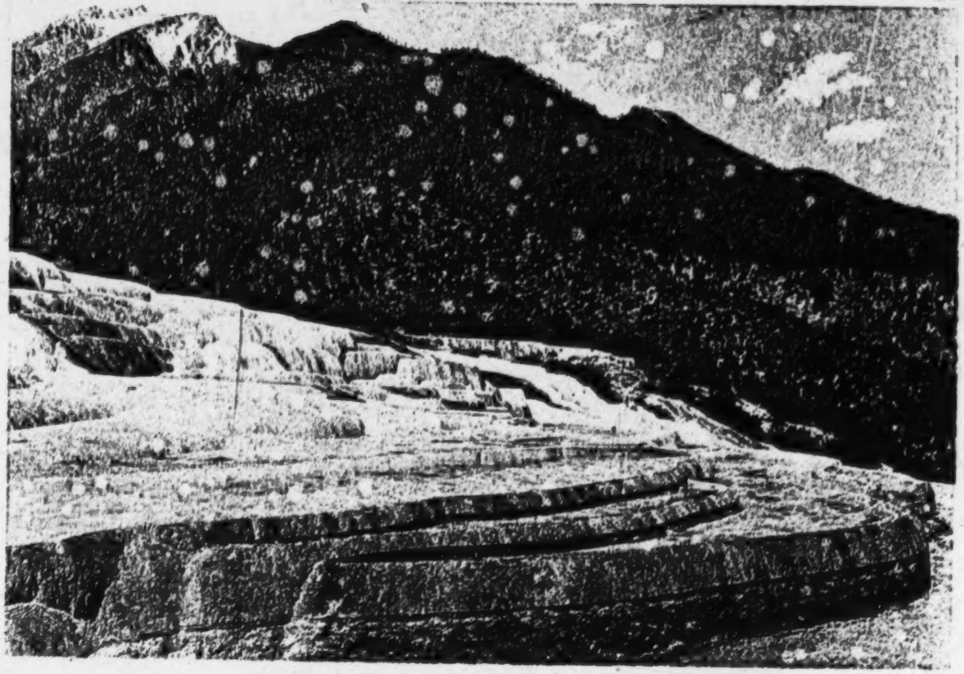

PLATE 138. — THE SINTER TERRACES OF BBĔR-P'ĔR-DTĔR

白 地 泉 華 臺

They have the aspect of artificial terraced ricefields. The basins are shallow and contain bluish-white water and thousands of pisolites.

[p. 244 c]

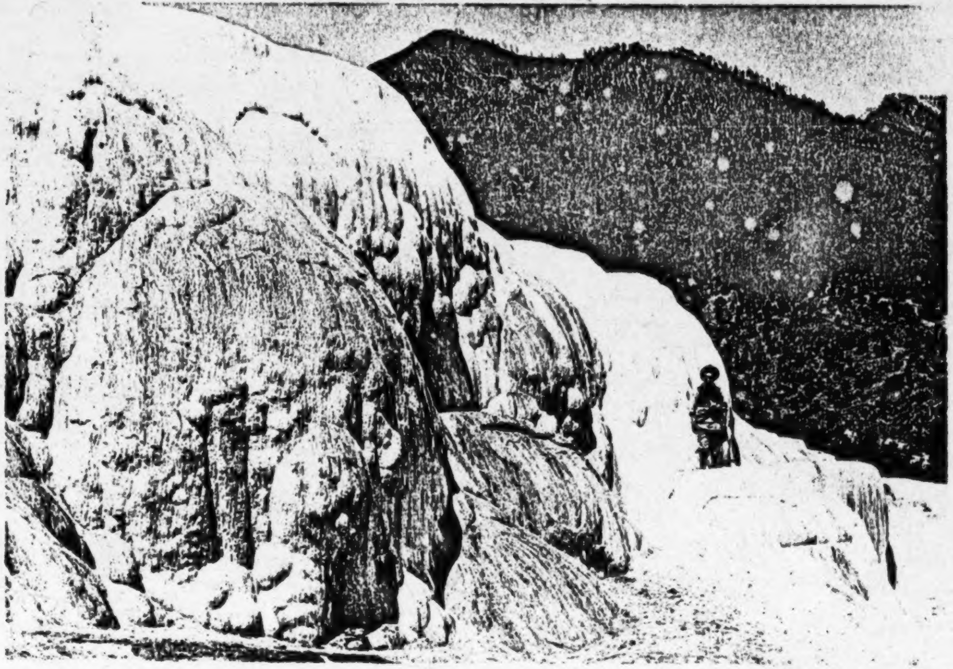

PLATE 139. — SINTER BUTTRESSES SUPPORT THE TERRACES OF BBÊR-P'ÊR-DTÊR

北地泉華狀壁稱彌勒佛

Near the base of the hill covered by the Sinter terraces, are huge bulging buttresses mostly hollow. The one on the left is called Mi-le-fo as it resembles the huge belly of the Chinese God of Wealth. Here sterile women come to pray and burn incense.

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2: Rock K-5 (1934-) 1947 AF16 Southwest China AF16

Sino-Tibetan Border Peoples AE3

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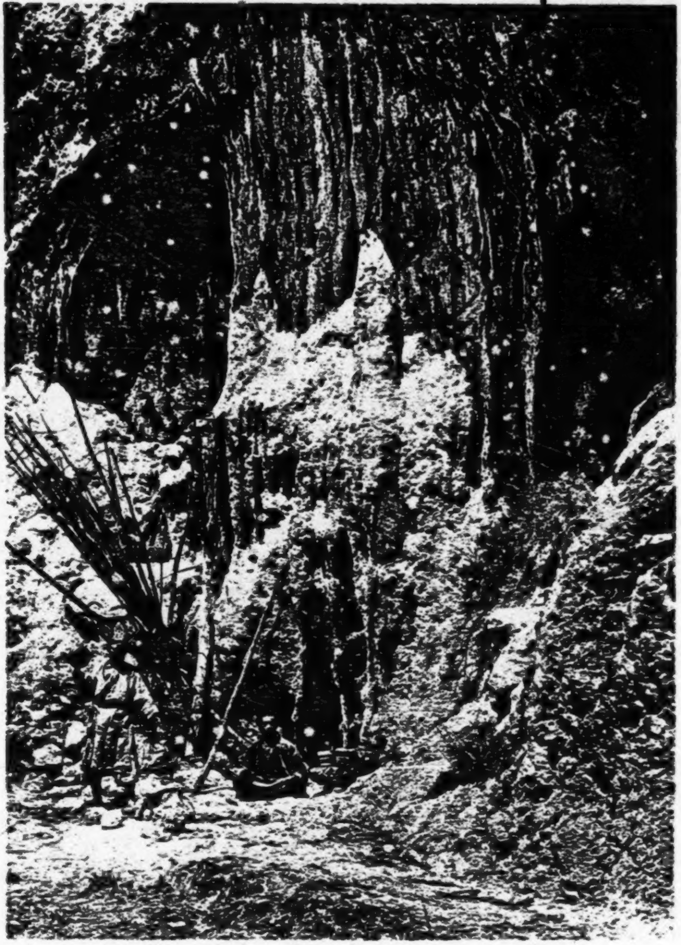

PLATE 140.—THE SACRED GROTTO SHI-LO NE-K'O

多 巴 聖 師 靈 洞

It is the wish of every Na-khi Dto-mba to visit, at least once, this sacred grotto where their teacher used to dwell. Two dto-mbas are performing a religious rite.

[p. 244 D]

[p.244 I]

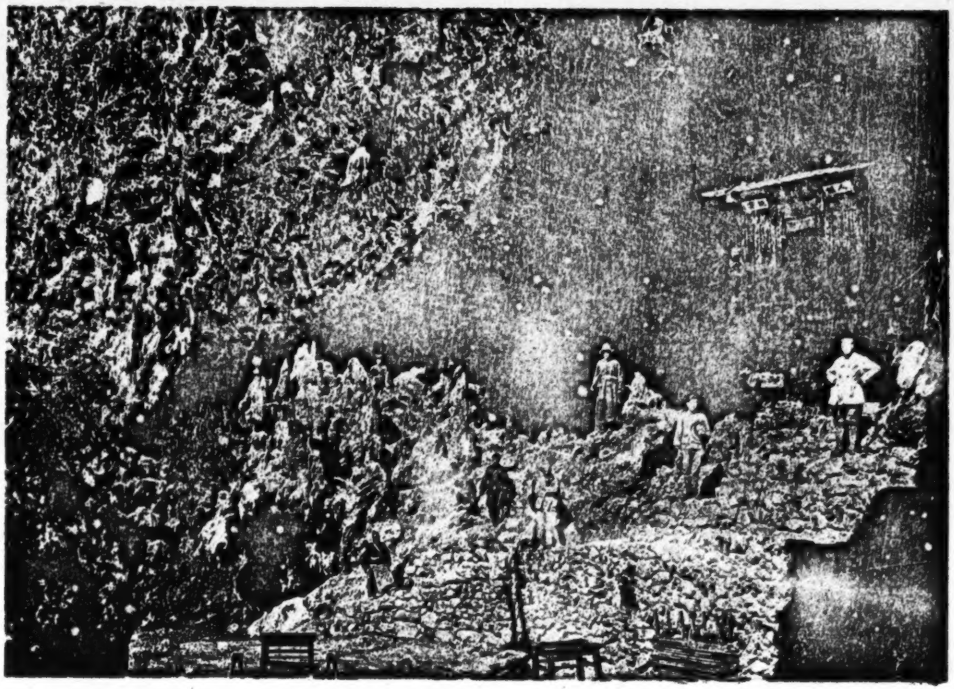

Plate 145. — The T'ai-tzu (Tung) Cave

阿[illegible]明太子洞

Aw-wùa-wùa, a brother of Sa-ddo, is said to have lived in this cave on the western side of the Li-chiang snow range. His name is also given to the cave.

AF16

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[p. 244 M]

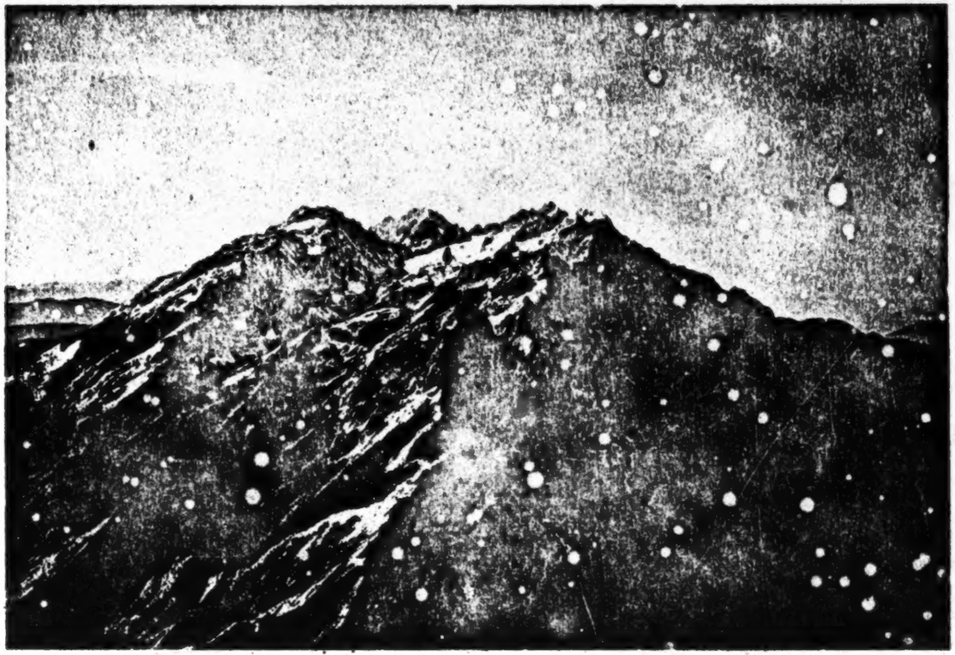

PLATE 149. — THE BULKY MASS 'A-TS'AN-GKO NV-LV

[illegible] 入 [illegible] [illegible] 角 攝 影 玉 龍 山

Flying at a height of 17,000 feet our plane, the K'un-ming, entered the 'A-ts'ag-gko gorge. The range called 'A-ts'ag-gko nv-lv forms a huge limestone pyramid with a vertical drop to the Yangtze of more than 10,000 feet. Gyi-nä nv-lv to left, Shan-tsa-tou in center (background).

133
2: Rock K-5 (1934-) 1947 AF16 Southwest China AF16

[p. 244 N]

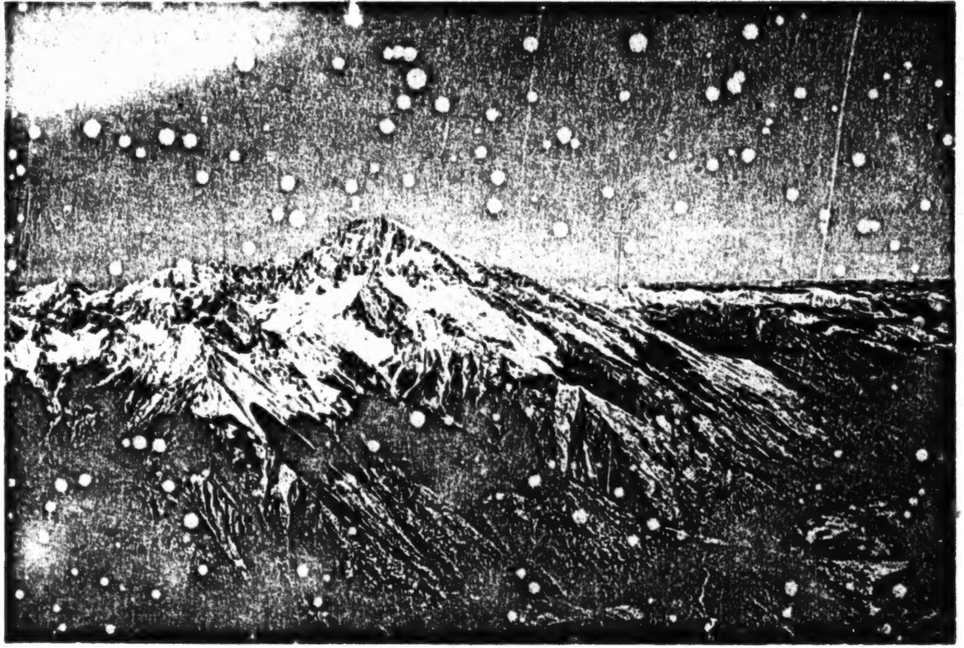

PLATE 150.—HA-BA NDSHĔR NV-LV AS SEEN FROM OUR PLANE

飛 機 攝 影 哈 巴 大 雪 山

Our plane approached this peak at a speed of 120 miles an hour, flying at an altitude of 16,000 feet. Ha-ba district is at its foot (lower left). The Chung-tien snow mountains in the distance. Ha-pa Shan is 18,700 feet and is the fourth highest peak of the Yü-lung Shan.

[p, 244-0]

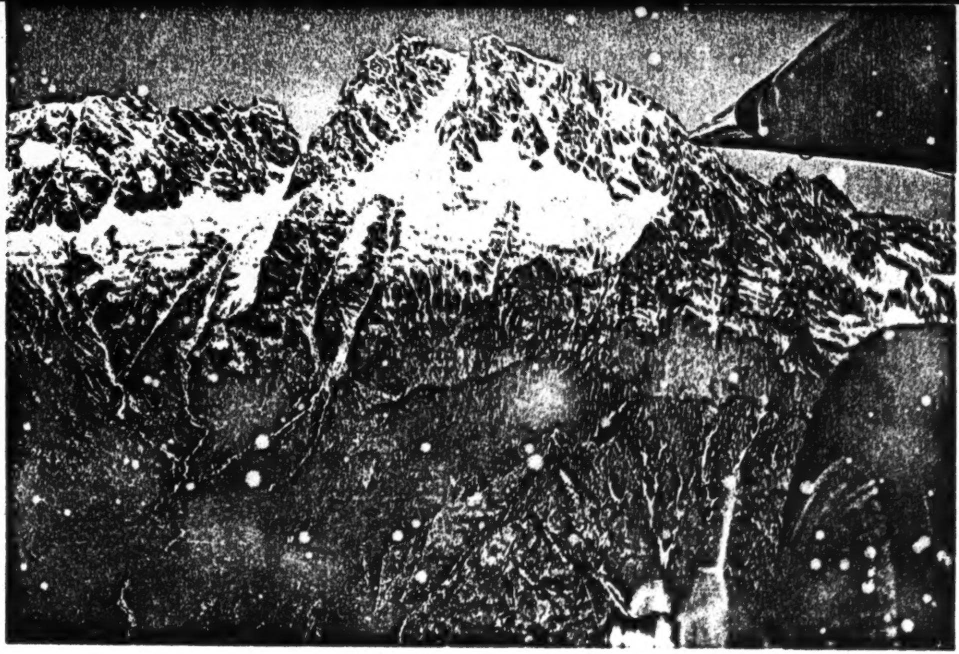

PLATE 151.—THE PEAK OF HA-BA NDSHĚR NV-LV OR HA-PA SHAN

飛 機 攝 影 哈 巴 大 雪 山

Our plane flying at 17,000 feet, enters the 'A-ts'an-gko gorge. Fierce winds sweeping through the gorge caused our plane to flutter through it like a piece of paper. This picture shows the southern face of the mountain which is 18,700 feet in height.

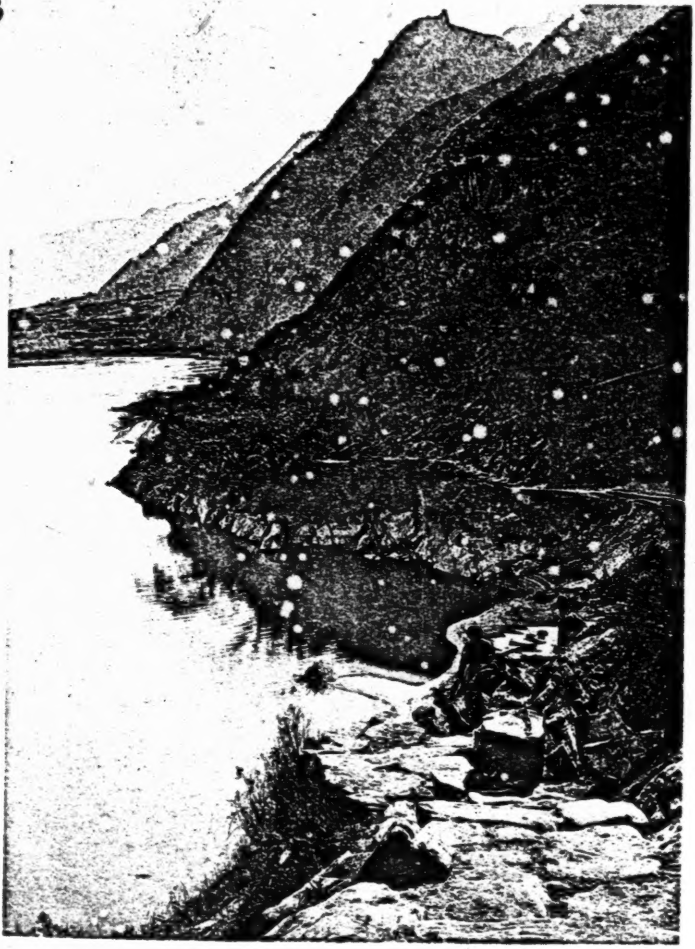

PLATE 153.—THE YANGTZE NEAR SHIH-MEN-KUAN

金 沙 江 石 門 關

The trail north of Shih-men-kuan is very difficult to negotiate especially in the summer when it is flooded by the Yangtze. In the distance immediately back of Shih-men-kuan is a steep conical mountain crowned by a temple.

[p. 298 A]

[p.298 B]

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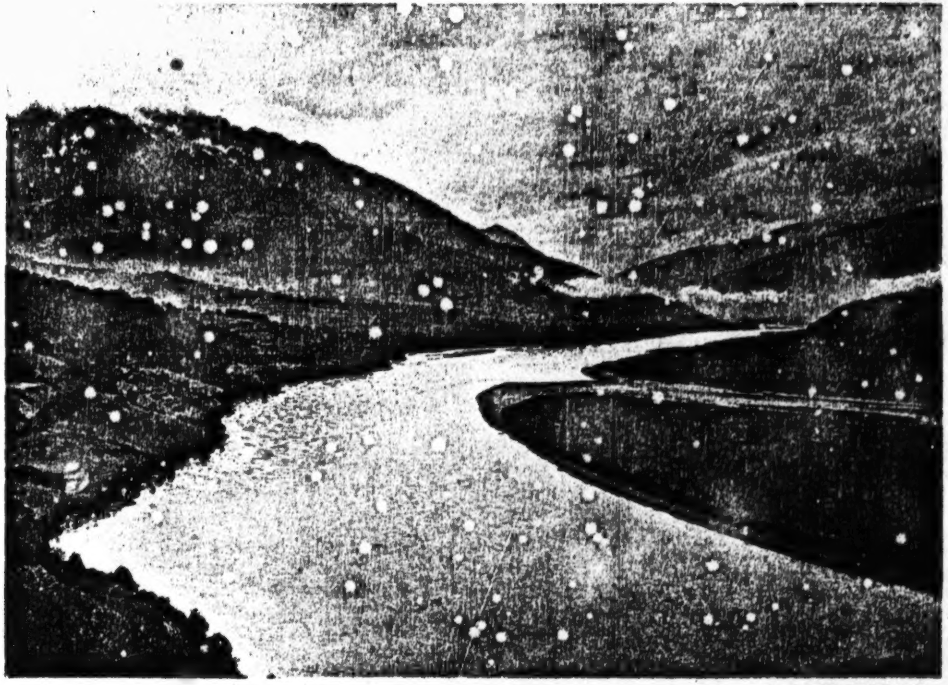
2: Rock K-5 (1934-) 1947 AF16 Southwest China AF16

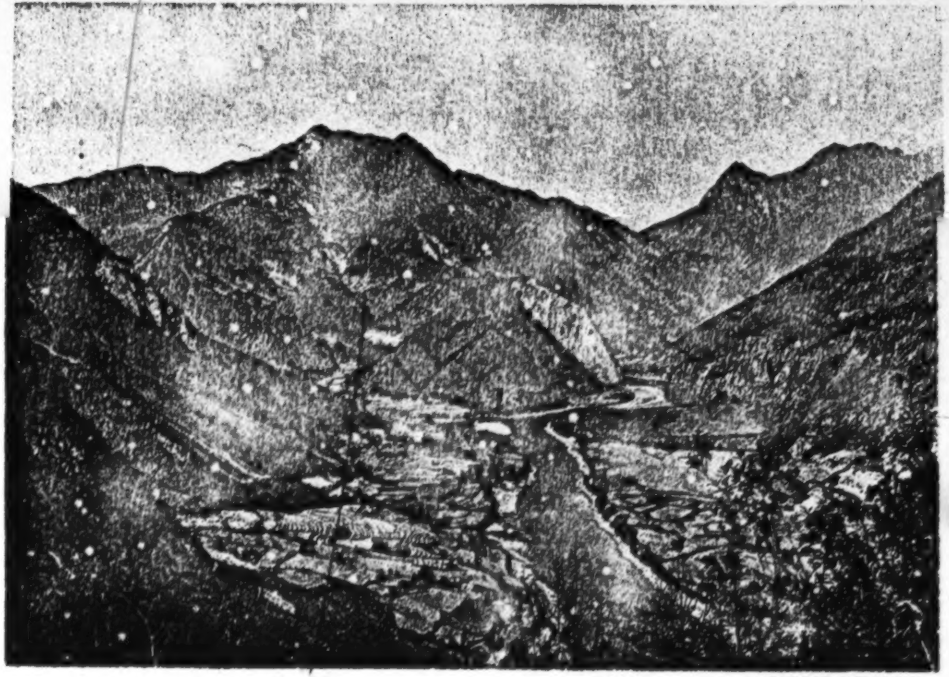


(Courtesy Nat. Geogr. Soc.)

PLATE 154.—THE YANGTZE NEAR NDA-LÜ

金 沙 江 蛇 繞 打 鼓

The large bend of the river is actually between the villages of Shang-ko-tsu and Ts'u-k'ai. Photographed from a bluff north of Shang-ko-tsu, 1½ stages north of Shih-ku.



(Courtesy Nat. Geogr. Soc.)

PLATE 155. — THE T'A-CH'ENG KUAN, ONE OF THE MOST HISTORIC PASSES OF NORTHWESTERN YÜN-NAN

金 沙 江 塔 城 關 北 面 其 宗

The T'a-ch'eng Kuan is now the Li-chiang — Wei-hsi border. In the T'ang dynasty and prior to it, it was the Na-khi — Tibetan border. An iron-chain bridge once spanned the Yangtze here. This bridge was destroyed in 794 A.D. Photographed from the top of the pass, also called Kuan-p'o, elevation 8,000 feet, looking north to Ch'i-tsung, visible to the left.

[p. 298 C]

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[p. 298 D]

(Courtesy Nat. Geogr. Soc.)

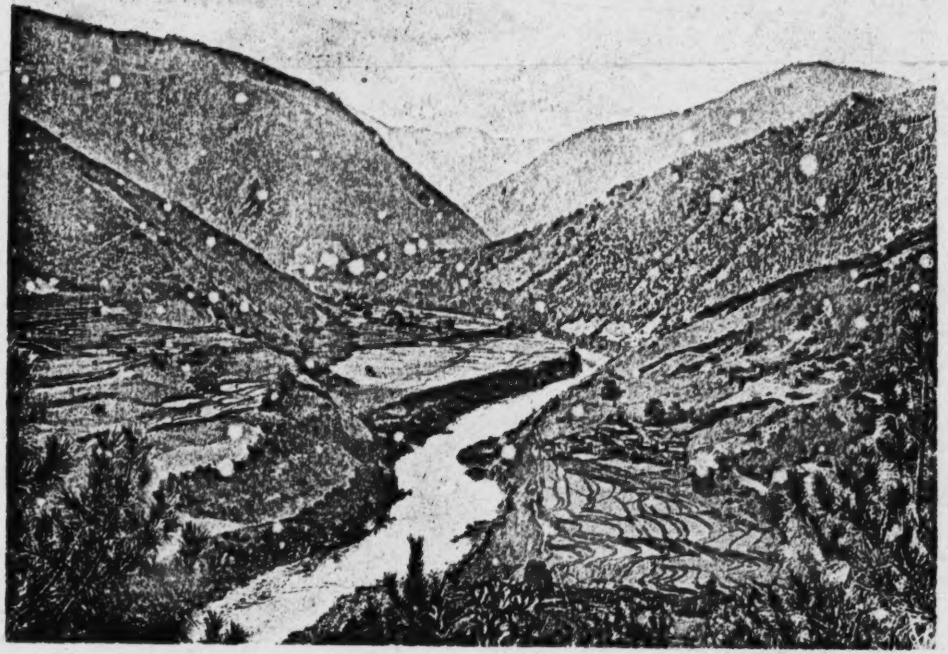
PLATE 156. — THE YANGTZE AT CH'I-TSUNG

古 [illegible] [illegible] [illegible] 此 [illegible] 交 界 處

The defile is the ethnic border between the Na-khi and Tibetans. The river flows through arid gorges and is still the border between Chung-tien and Wei-hsi — Te-ch'in (A-tun-tzu) as far as T'o-hsien [illegible]. From there on it becomes the border between Te-ch'in and Hsi-k'ang.

AF16

[p.298 I]



(Courtesy Nat. Geogr. Soc.)

Plate 161.—The Mekong near the Na-khi Village of Lo-ndu

瀾 滄 江 [illegible]

Photographed, looking upstream, from a lateral spur immediately north of Ba-dü. The village of Lo-ndu is visible to the right on a terrace above the Mekong.

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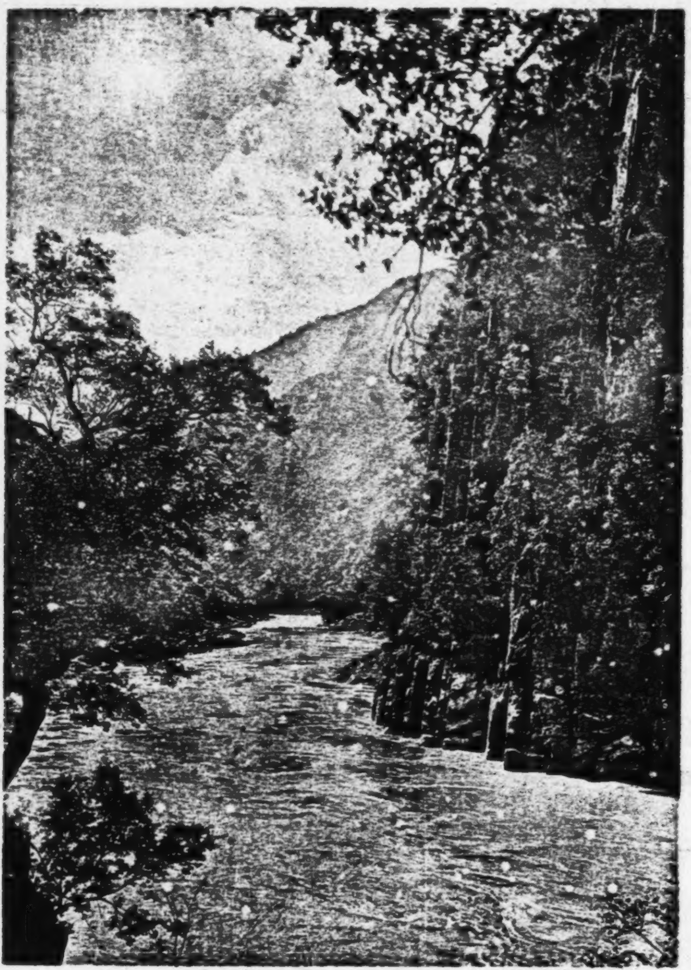


(*Courtesy Nat. Geogr. Soc.*)

PLATE 163. — THE MEKONG GORGE NEAR TSE-YI-P'O

瀾 滄 江 [illegible]

Formidable rapids preclude any attempt at navigation. On the steep walls of the gorge grow Junipers and Cypresses.

[p. 298 K]

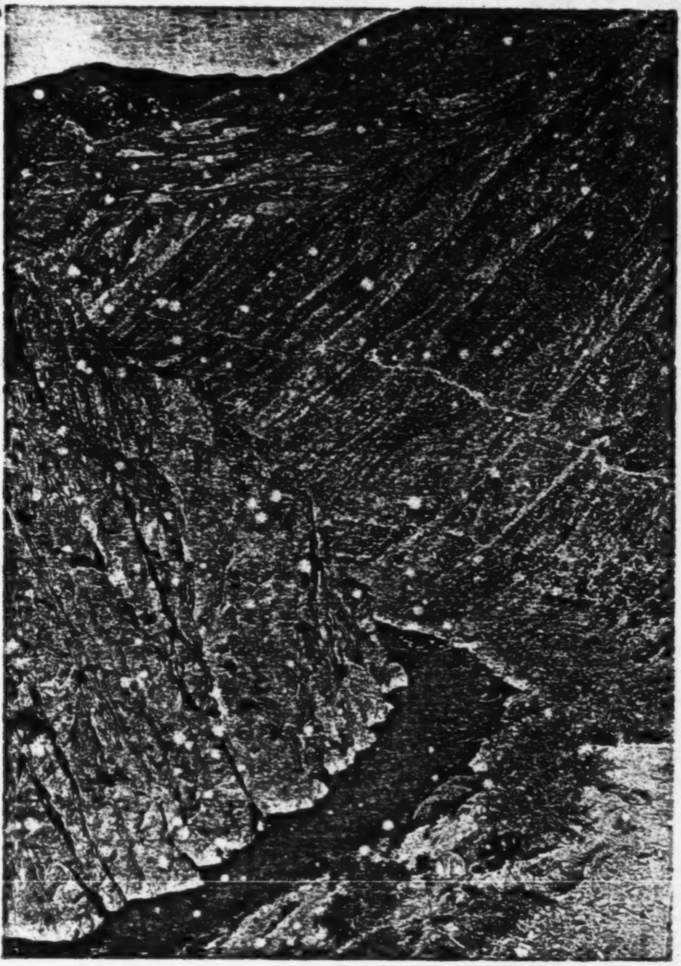
(Courtesy Nat. Geogr. Soc.)

PLATE 167. — THE MEKONG NORTH OF YANG-TSA

[illegible]

The Valley of the Mekong between Yang-tsa and Yeh-tsi is an arid trench. Note the trail built up against the cliff. Owing to constant rockslides the Chinese have given this part of the gorge the name of "Hill of the shuttle rock."

[p. 298-0]



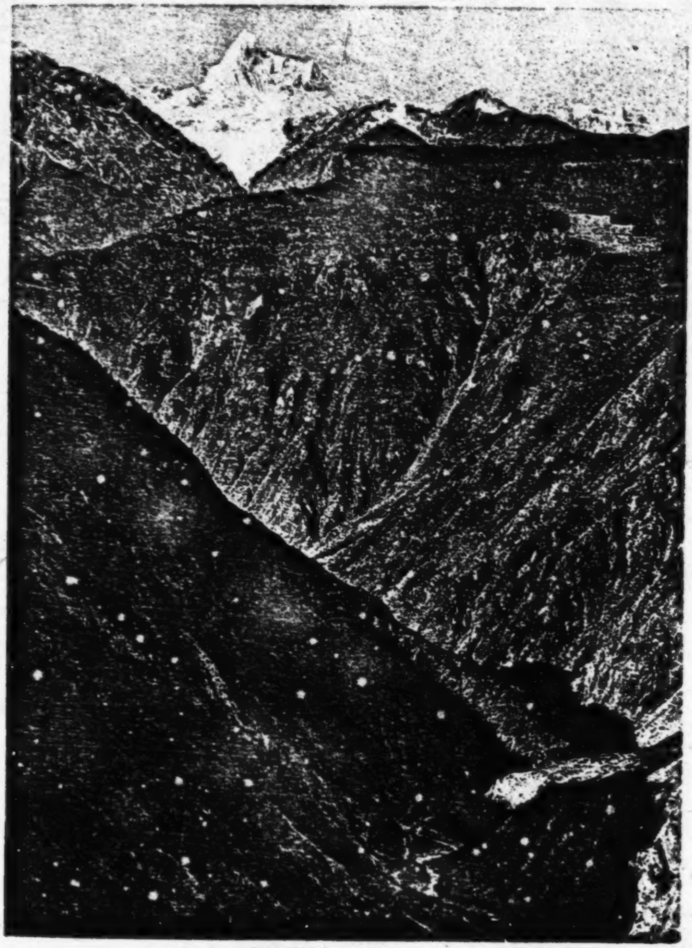
(Courtesy Nat. Geogr. Soc.)

PLATE 168.—THE ME-KONG NEAR NGUN-YA, LOOKING UPSTREAM

瀾 滄 江 [illegible] [illegible] [illegible] [illegible]

The caravan trail which leads to Ngun-ya is visible on the east slope of the arid gorge. The Mekong, is of a blue green, especially in the winter. The bushes are *Sophora viciifolia* and *Bauhinia densiflora*.

[p. 298 P]



(Courtesy Nat. Geogr. Soc.)

PLATE 171.—MOUNT ME-TSE-MO, THE HIGHEST PEAK OF THE KHA-WA-KAR-PO RANGE

[illegible]支大雪山, [illegible][illegible]大雪山之最高峯

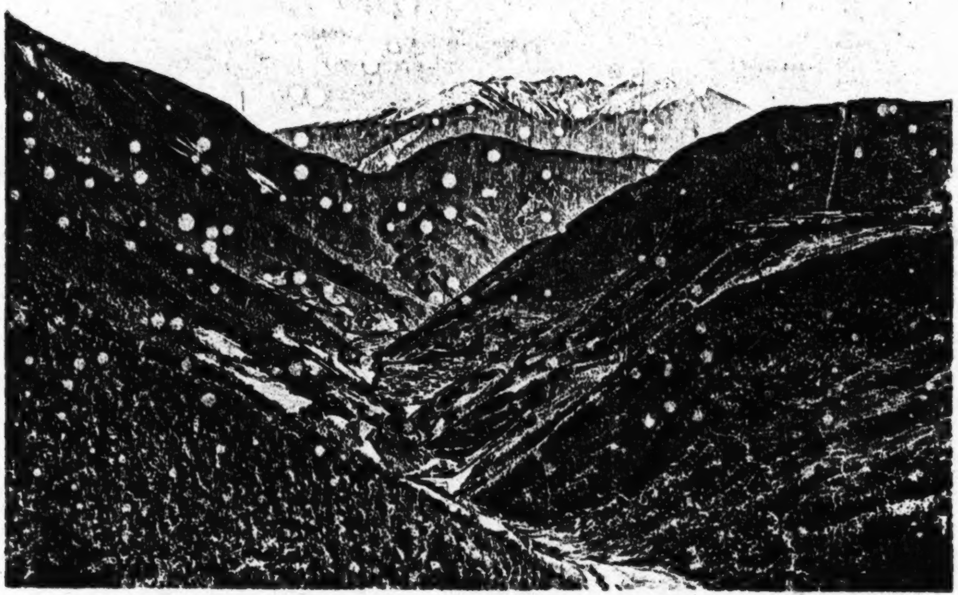
The peak is approximately 21,000 feet — in height. Photographed from an elevation of 9,500 feet, above the village Ch'i-tzu-shih in the Te-ch'in (A-tun-tzu) valley.

[p. 330 C]

●133

2: Rock K-5 (1934-) 1947 AF16 Southwest China AF16

[p.330 D]



(Courtesy Nat. Geogr. Soc.)

PLATE 172.—THE TOWN OF TE-CH'IN (A-TUN-TZU) AS SEEN FROM THE DRU LA, ELEVATION 12,500 FEET

德欽(阿墩子)城, 白芒山背景

To the right on the hillside is the lamasery of Te-ch'in Ssu. In the background Pai-mang Shan.

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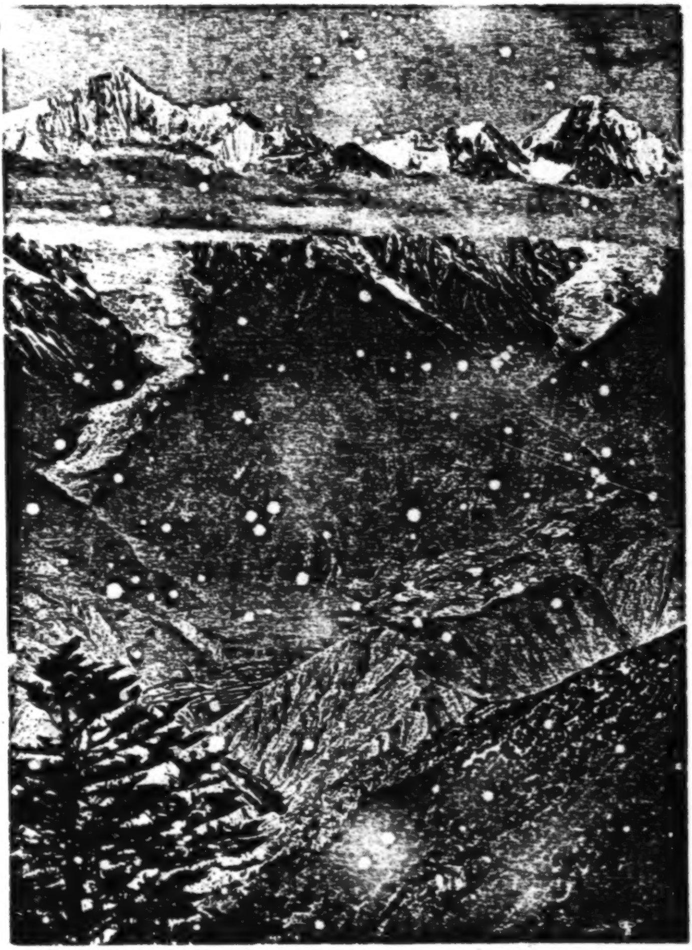


(Courtesy Nat. Geogr. Soc.)

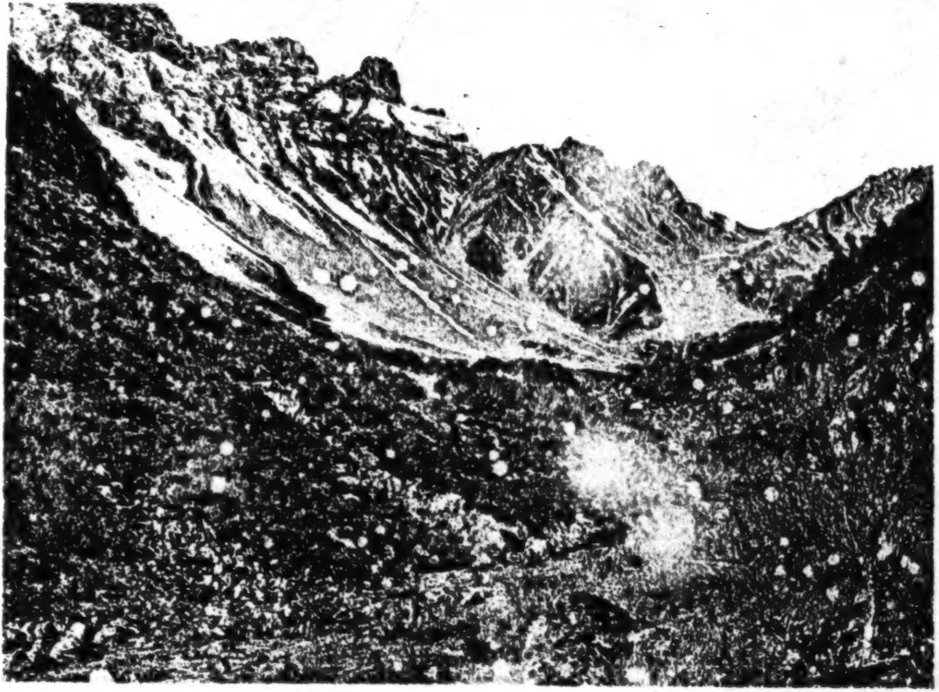
Plate 174. — Kha-wa-kar-po, the Central Peak of the Range

雲南方面[illegible][illegible]大雪山

This magnificent range whose glaciers descend deep into the Mekong valley, forms the Yün-nan — Tibet border. Abies in foreground. Photographed from Mount Drong-go, west of Te-ch'in (A-tun-tzu).

[p. 330 F]

[p. 330 I]



(Courtesy Nat. Geogr. Soc.)

PLATE 177.—THE SACRED DO-KAR LA

多卡拉雪山口藏邊界

The "Pass of the White Rock" is at the head of the Valley at an elevation of 14,500 feet. Masses of Rhododendron in foreground.

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2: Rock K-5 (1934-) 1947 AF16 Southwest China AF16

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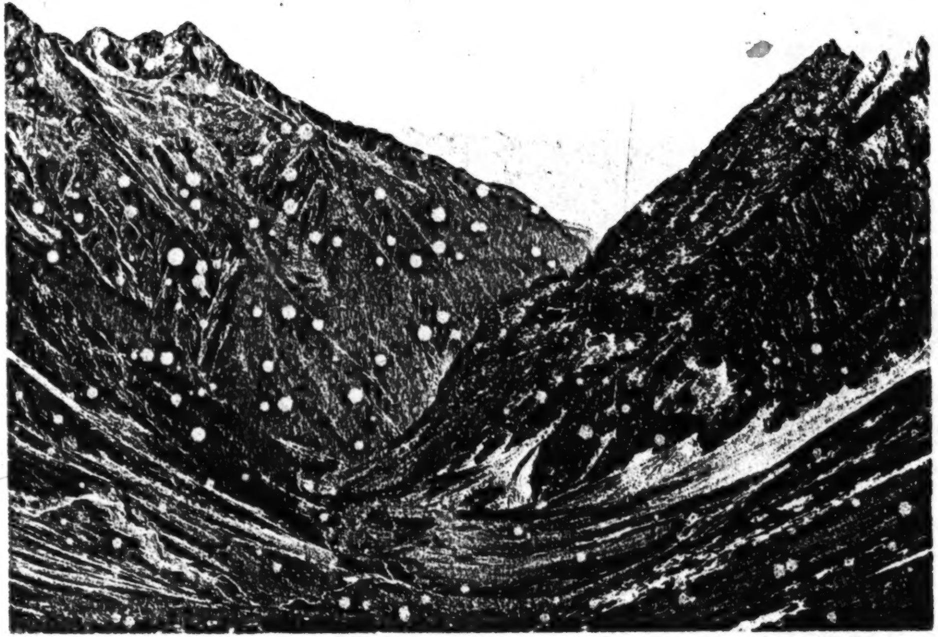
[p. 330 I]



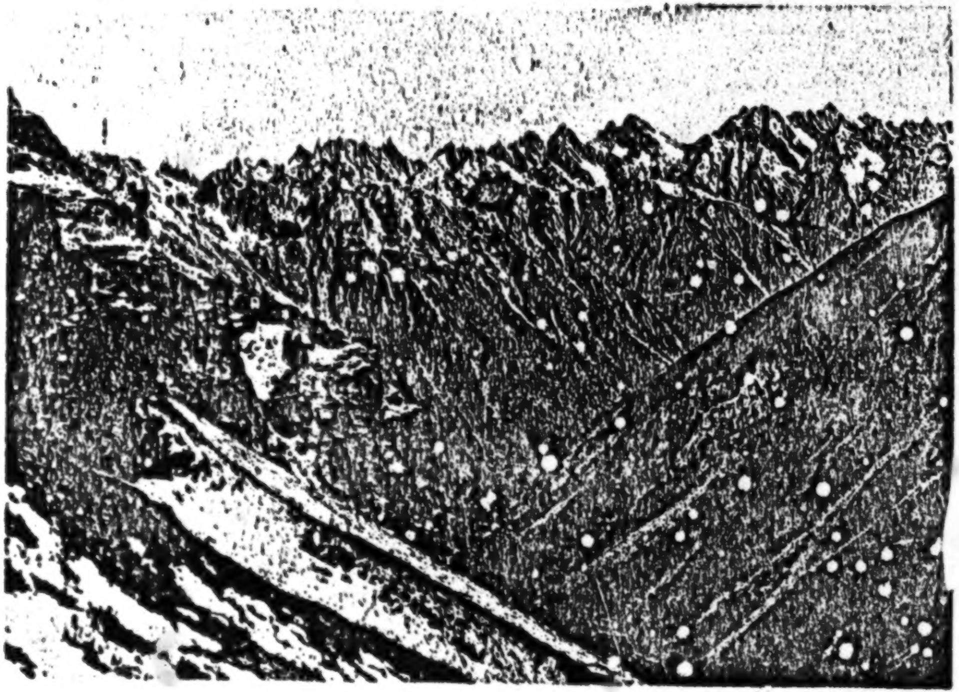
(Courtesy Nat. Geogr. Soc.)

PLATE 178. — LOOKING TOWARD YÜN-NAN FROM THE DO-KAR LA

自 多 卡 拉 望 雲 南 境

View down the Do-kar La valley; the range in the distance is the Mekong — Yangtze divide.

[p.330 K]



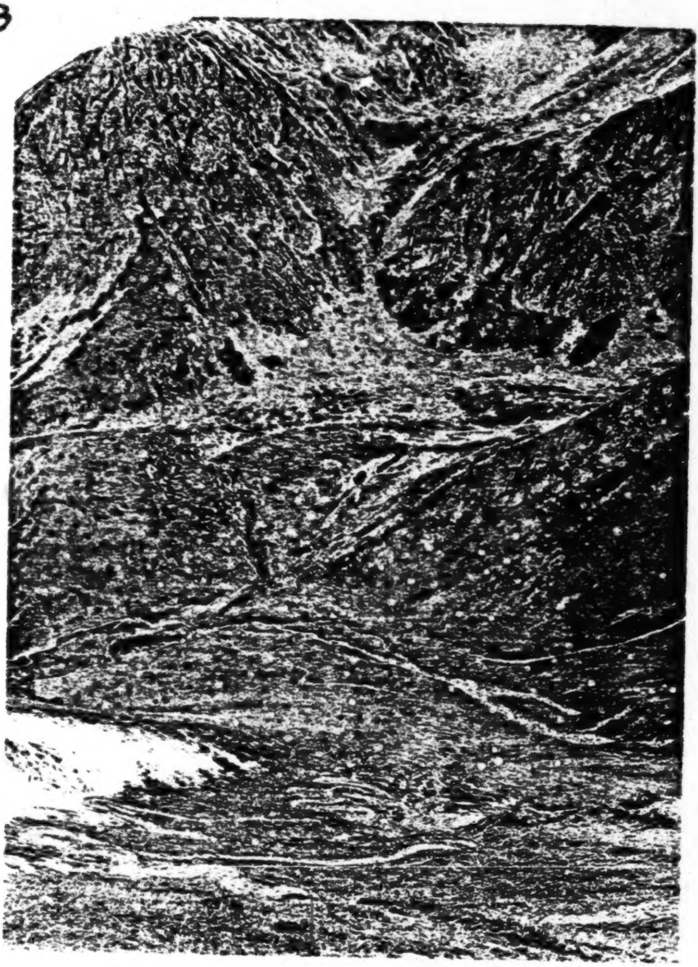
(Courtesy Nat. Geogr. Soc.)

PLATE 179. — THE MOUNTAINS OF TSHA-RONG

[illegible]

View west from the Do-kar La into Tsha-rong; the range in the background is the Drö-su Chhu — Salween divide in Lha-sa — controlled Tibet.

●133



(Courtesy Nat. Geogr. Soc.)

PLATE 180. — THE DESCENT INTO TSHA-RONG SOUTHEASTERN TIBET

多 卡 拉 經 西 藏 路

In 118 zigzags the trail leads from the Do-kar La into the Drö-su Chhu valley of Tsha-rong.

[p. 330 L]

(*Courtesy Nat. Geogr. Soc.*)

PLATE 181.—THE KHA-WA-KAR-PO PEAK VIEWED FROM TSHA-RONG, TIBET

[illegible] [illegible] 方 [illegible] [illegible] [illegible] 大 雪 山

Looking east up Dō-chu-pu-drön valley towards the massive Kha-wa-kar-po pyramid. Spruces and firs cling to the limestone cliffs.

[p. 330 M]

They are cruel and savage; they use cross-bows ST [411]
and arrows to hunt wild animals. They plait a head-band of red *t'eng* 藤 291
(rattan, cane) which they wear; their hair is dishevelled. Their clothes are short and of hemp cloth, their trousers are made of red silk. They wear no shoes, the women use the same [as the men].

"The men and women after the age of 10 tattoo their faces with dragons, ST 304
phœnixes, and flower-decorations. When one sees them they frighten one. The women tie hemp cloth around their waists. They gather *Huang-lien* for ST 262
their living; they eat hair and drink blood [that is, they are savages]. They love to eat insects and rats."

The *Li-chiang fu chih lüeh* states that "the men tie their hair together into ST 302
a knot with a string, seven to eight inches high."

The Lu-tzu are great hunters and every child carries a cross-bow, shooting ST 411
every bird in sight. 224

The trail from the Si La down to Bahang was constructed by Père André and took over three years to build; each laborer received seven cents silver 5
per day and supplied his own food. Bahang is at an elevation of 8,200 feet on 487
a bluff overlooking Do-yon lung-pa [in Li-su, Tima-lo, and in Lu-tzu, Do-mar-lang], whose stream debouches into the Salween to the south. 133 ●

From Bahang the trail leads down a narrow ravine with walnut trees, crosses a small stream near its head, and follows the western valley wall which drops vertically to the bottom of the ravine some 800 feet below. The Lu-tzu, like most mountain tribes, are in the habit of setting fire to the dry, grassy hill-sides in the winter, which makes travelling sometimes very dangerous; in 1922, a year before my visit, three Li-su with their sheep were caught by the sweeping fires, and as there was no escape either up or down the valley, the walls being vertical, they were burnt to death. The slopes are usually covered with tall grasses, bracken (*Pteridium aquilinum*) and a few pines.

Descending steeply over a huge land-slide near the bottom of the Do-yon lung-pa where there was once a Lu-tzu village, now buried under the mass of detritus, we come to the hamlet of Me-ra-dam (the Mu-la-tang of Kingdon Ward). The huts composing this Lu-tzu village, like all others, do not cost more to construct than three silver taels each, material and all (PLATE 189).

From Me-ra-dam the trail ascends in steep zigzags through grass and bracken with scattered *Alnus nepalensis* trees, until near the top of the ridge it enters dense forest of large trees loaded with many epiphytes, while the ground is covered by a single species of pinnate fern with separate fruiting fronds, *Plagiogyria glauca*. The forest on the summit ridge is mainly composed of magnolias (*Magnolia rostrata* and *M. nitida*), Sorbus, and Acer, with Arundinaria undergrowth. This spur is the Do-yon lung-pa—Salween divide and is known as A-lo-la-kha, elevation 9,500 feet. From this divide, where Li-su were clearing the forest for a dwelling, the trail leads steeply over a narrow lateral spur into the depts of the Salween valley (PLATE 190); the slopes being covered with grasses, bracken, and pine trees.

Chang-ra village on the Salween. — Descending past a Li-su hamlet we reach the Lu-tzu village of Chang-ra (Cho-la 卓拉) situated on a gentle alluvial slope at an elevation of 5800 feet.

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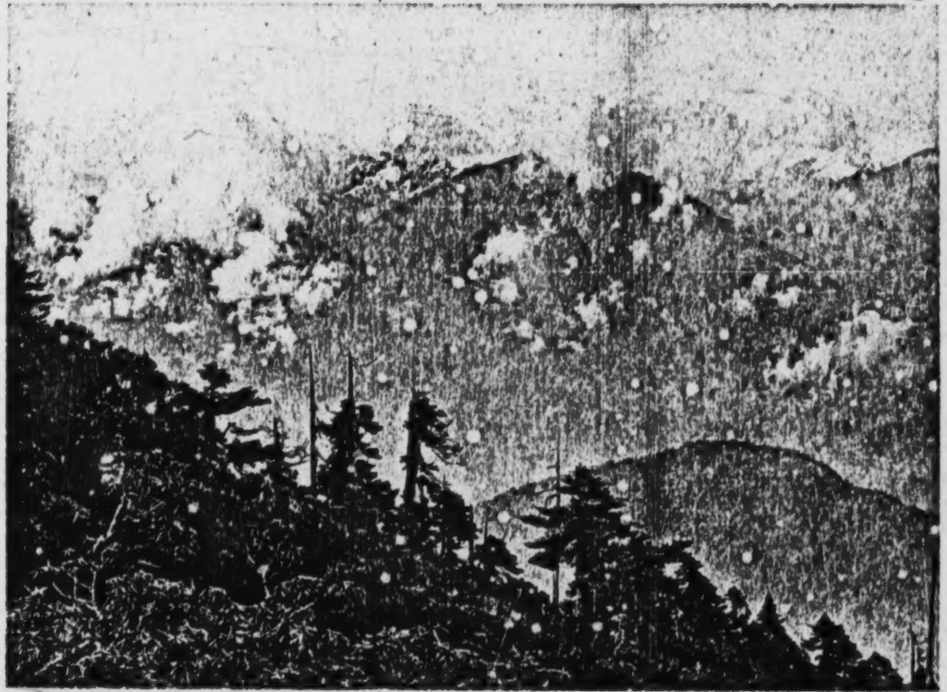
[p.362 B]



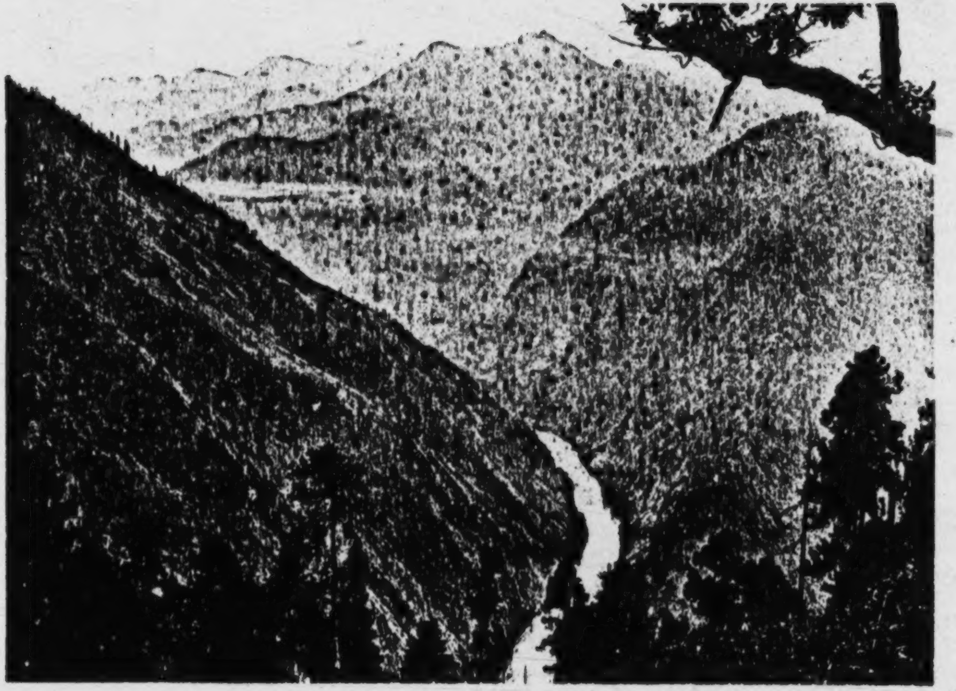
(Courtesy Nat. Geogr. Soc.)

PLATE 186. — THE VALLEY OF THE SALWEEN

怒 江 谷, [illegible]

Looking west from the Nying-ser La, elevation 12,400 feet, into the Salween valley. The central spur (lower right) is A-le-la-kha; the snow-covered range is the Salween — Irrawadi (Ch'iu Chiang) divide. Abies (firs) and Rhododendrons in foreground.

[p.362F]



(Courtesy Nat. Geogr. Soc.)

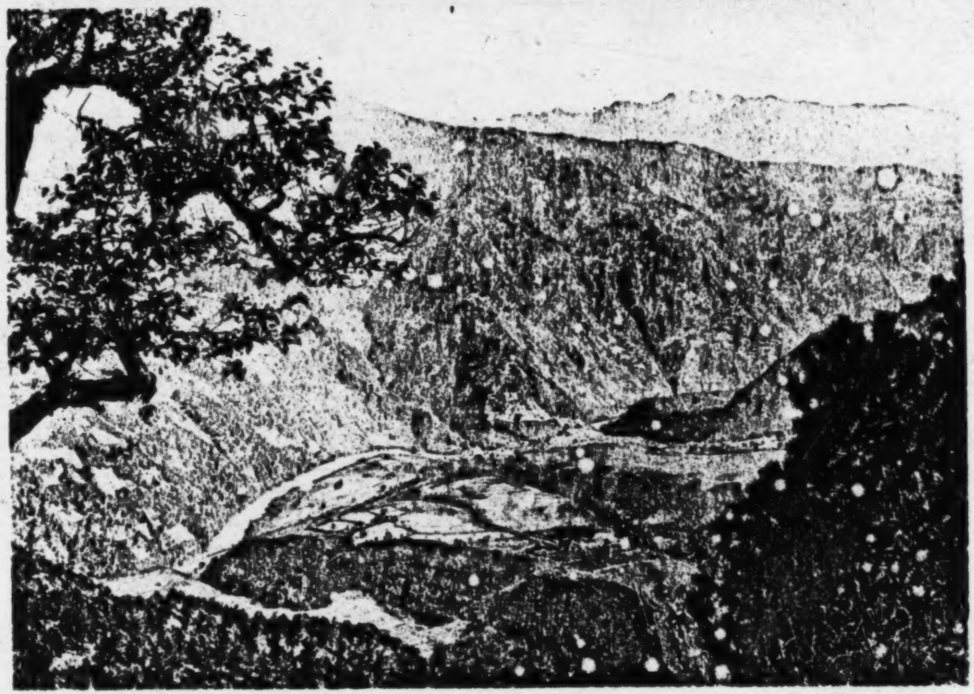
PLATE 190.—THE SALWEEN RIVER AS SEEN FROM A-LO-LA-KHA

怒江, [illegible] 之南

The river, flowing south in its narrow trench; seen from an elevation of 8,000 ft. on the western slopes of A-lo-la-kha above Chang-ta (Cho-la) and south of Ch'ang-p'u-t'ung.

133
2: Rock K-5 (1934-) 1947 AF16 Southwest China AF16

[p. 362-I]



(Courtesy Nat. Geogr. Soc.)

PLATE 193. — CH'ANG-P'U-T'UNG IN THE SALWEEN VALLEY

昌 蒲 桶 怒 江 溝

The village is situated on a wedge-shaped terrace, at an elevation of 6.000 feet. Photographed looking south-east toward the Mekong — Salween divide.

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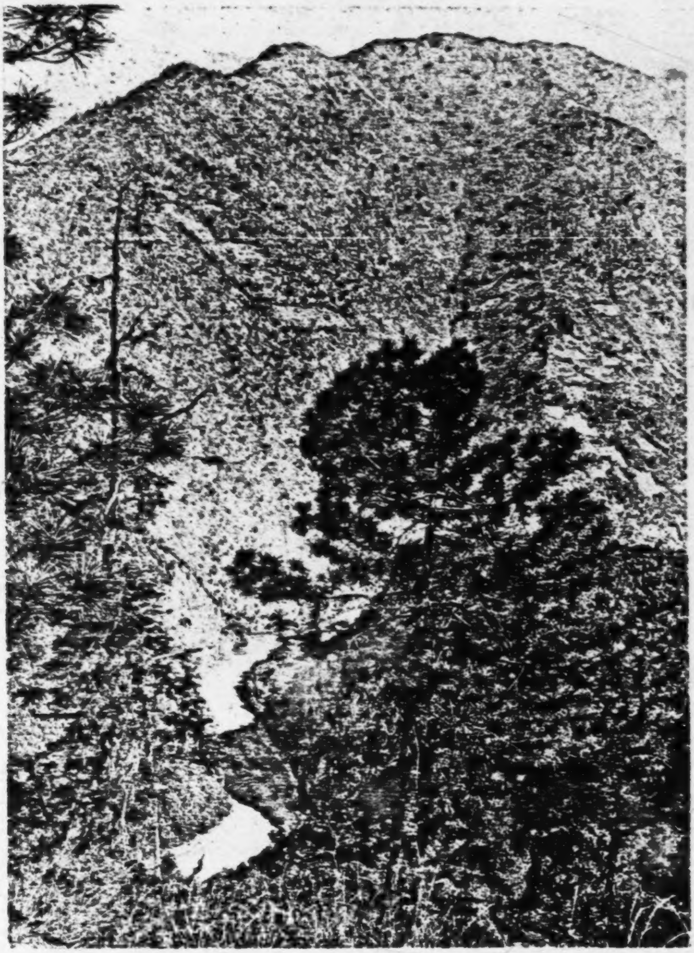


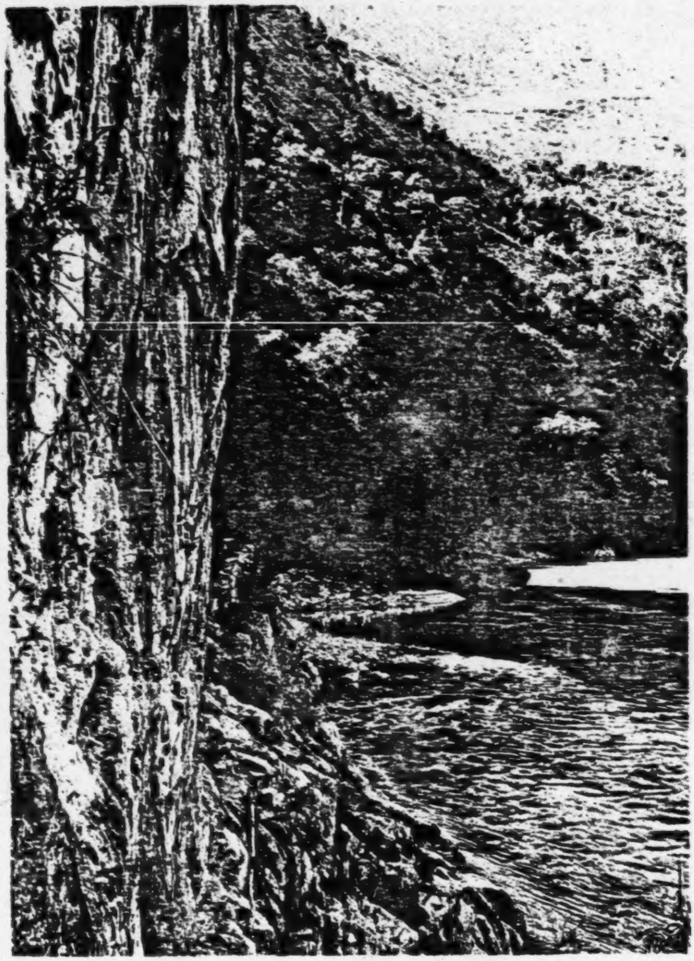
(Courtesy Nat. Geogr. Soc.)

PLATE 194. — THE MARBLE GORGE OF THE SALWEEN

[illegible]

North of Ch'ang-p'u-t'ung the Salween flows through a beautiful marble gorge, it is the gateway to South-eastern Tibet or Tsha-rong. Pines in foreground.

[p, 362 J]



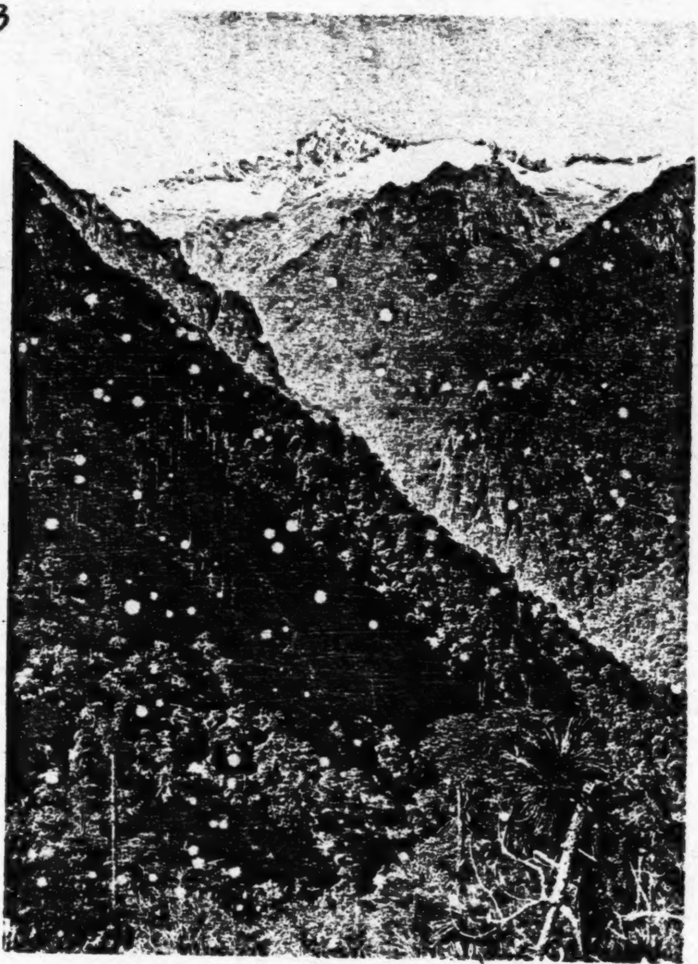
(*Courtesy Nat. Geogr. Soc.*)

PLATE 195. — WITHIN THE SALWEEN MARBLE GORGE

[illegible] 江 峽 [illegible]

The trail through the gorge is on the left and consists of a few sticks visible in the picture. The Salween valley is here densely forested with tropical, evergreen trees and palms, which higher up give way to pines, spruces, firs and finally alpine meadows studded with gorgeous flowers. The bright stream of light on the Salween is the mouth of the Ssu-chi-t'ung.

[p. 362 K]



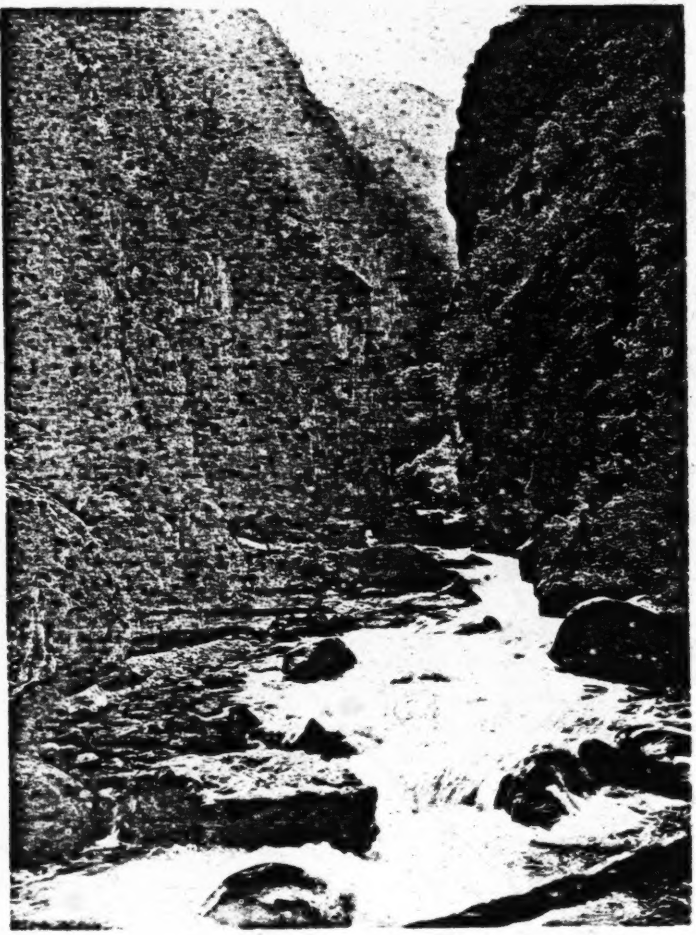
(Courtesy Nat. Geogr. Soc.)

PLATE 196. — MOUNT KE-NYI-CHUM-PO OF THE SALWEEN — IRRAWADI DIVIDE

[illegible] 高 黎 貢 山

This snowpeak is a little north of Ch'ang-p'u-t'ung at about latitude 28° 2'. A pass called the Gom-pa La leads to the Ch'iu Chiang or Trun, still in Yün-nan. The tremendous gorge at the foot of the mountain mass is Ssu-chi-t'ung. This is the home of *Taiwania cryptomerioides*.

[p. 362-L]



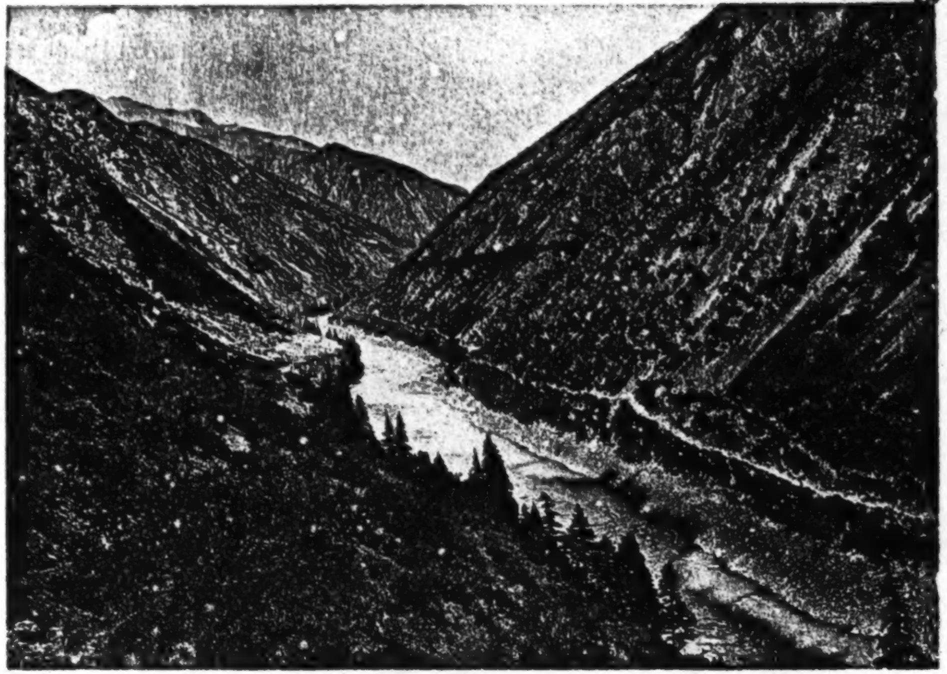
(Courtesy Nat. Geogr. Soc.)

PLATE 200. — THE DO-KAR LA STREAM AT ITS CONFLUENCE WITH THE MEKONG

多卡拉河口

The Do-kar La Stream is joined by the Lung-dre Stream below Lung-dre and united they enter the Mekong at an elevation of 7,300 feet.

[p. 362-N]



(Courtesy Nat. Geogr. Soc.)

PLATE 201. — THE MEKONG NEAR THE MOUTH OF THE DO-KAR LA STREAM

瀾滄江近多卡拉河口

The Mekong in its arid gorge, looking up stream (north) from its west bank. The trees lining the river bank in the immediate foreground are Cypresses (*Cupressus Duclouxiana*).

[p. 394 C]

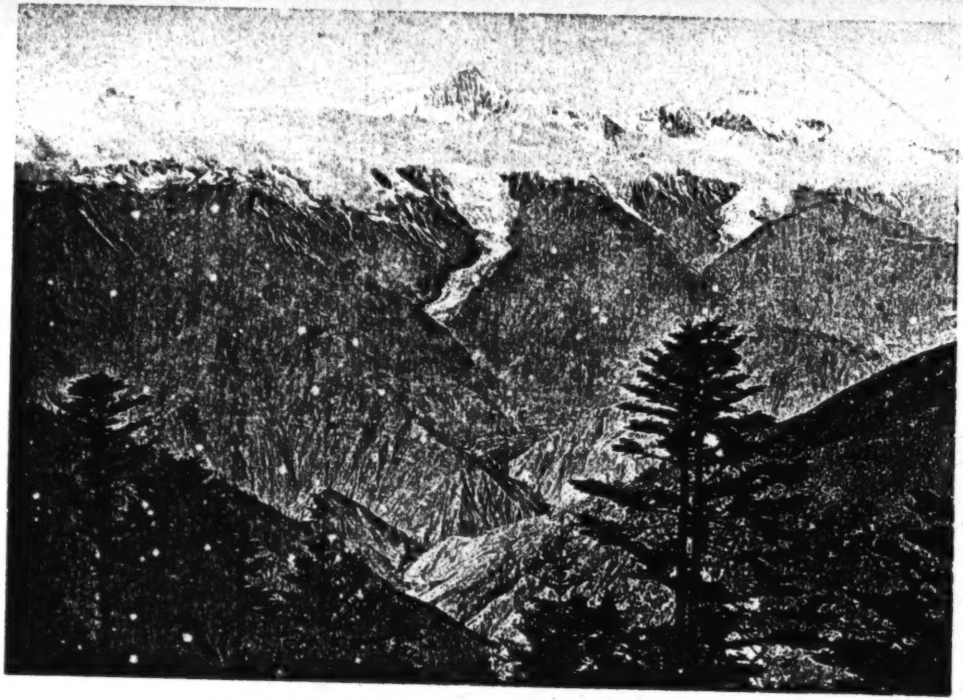


PLATE 203. — THE KHA-WA-KAR-PO RANGE AS SEEN FROM PAI-MANG SHAN (Courtesy Nat. Geogr. Soc.)

阿墩大雪山全景由白芒山望見

Next to Me-tse-mo, the central peak Kha-wa-kar-po, whence the range derives its name, is the most beautiful. Me-tse-mo is not visible, it is to the south of the range here pictured. The last peak (right) is Si-go-dum.

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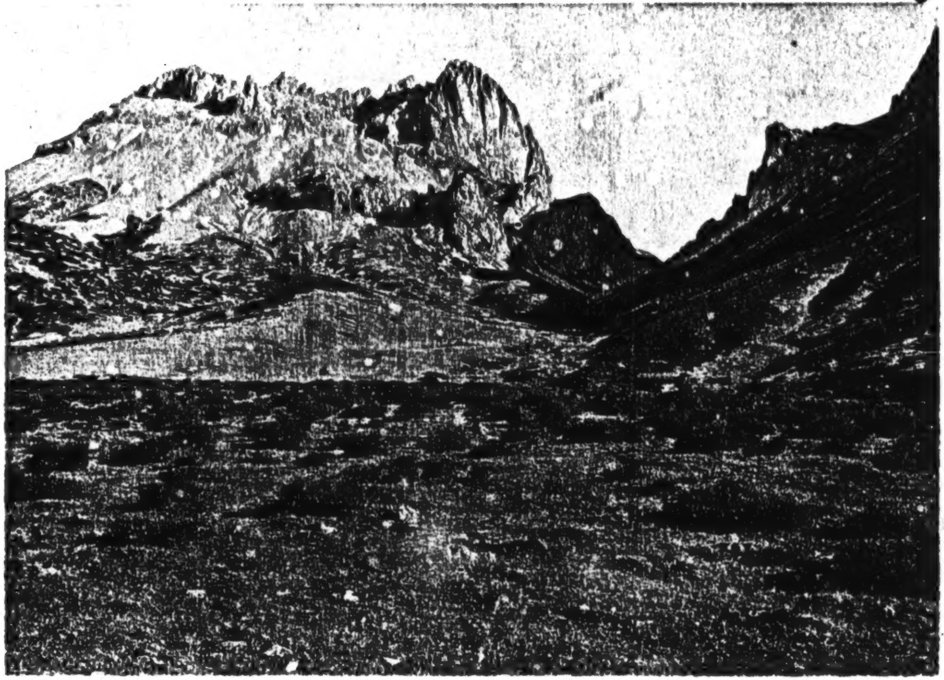
[P.394-D]

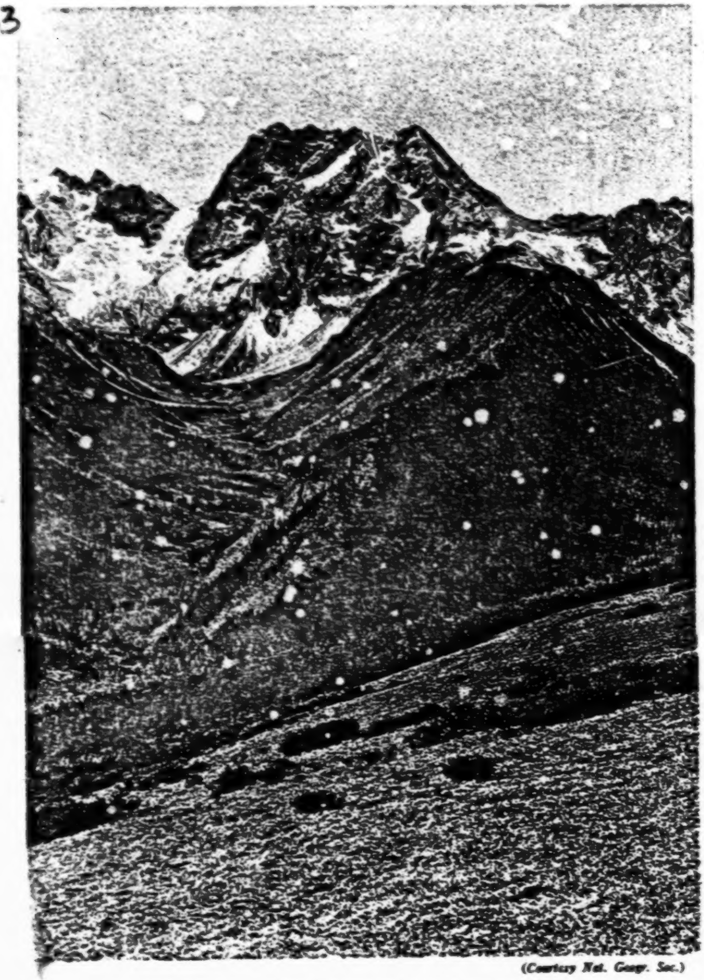


(Courtesy Nat. Geogr. Soc.)

PLATE 204. — THE HIGHEST PASS ACROSS THE PAI-MANG SHAN

白 牦 (白 馬) 拉

The pass is 15,800 feet above sea-level; to the west facing this view are the snow and glacier-crowned peaks of Pai-mang Shan, to the east (in background) bare yellow massive crags of rhyolite. The low bushes in foreground are *Rhododendron tapetiforme*.



(Courtesy Nat. Geogr. Soc.)

PLATE 205.—THE HIGHEST PEAK OF PAI-MANG SHAN

白 茫 山

The peak is 20,000 feet in height and mainly composed of granite. Photographed with front lens removed, looking west from an elevation of 15,000 feet.

[p.394 E]

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[p.410-H]

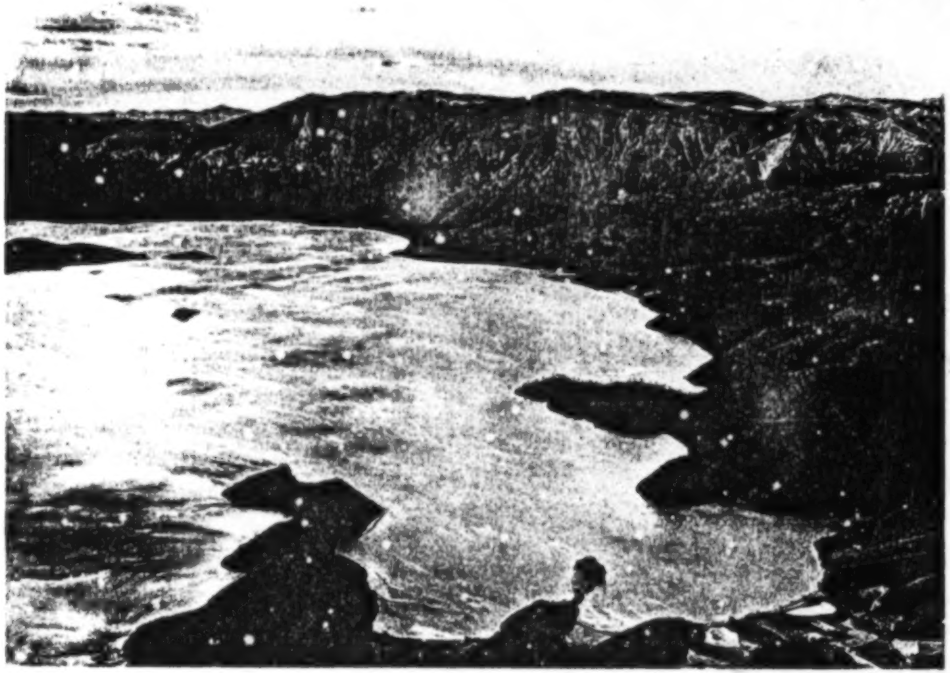
(Courtesy Nat. Geogr. Soc.)

Plate 216. — The Lion-head Mountain or Shih-t'ou Shan

獅 頭 山 與 瀘 沽 湖

The southern end of Seng-ge ga-mu is broad and massive hence the Chinese call it Lion-head. It is 13,100 feet in height and rises 3,600 feet above the lake. At the foot of the upper limestone cliffs is a large cave.

[p.410-I]



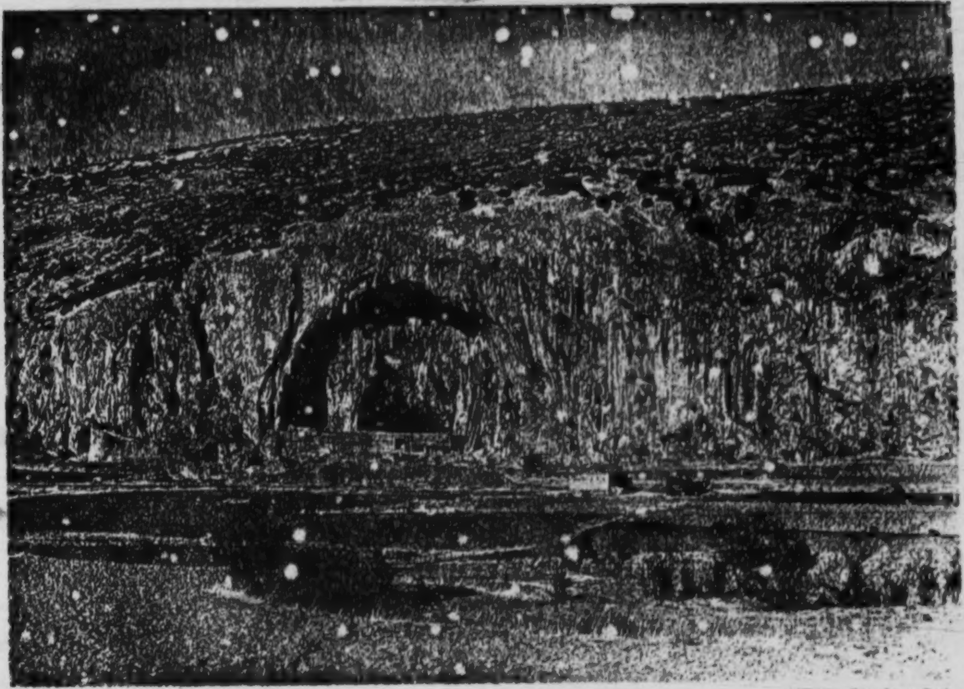
(Courtesy Nat. Geogr. Soc.)

PLATE 217. — THE WESTERN END OF THE YUNG-NING LAKE

[illegible]

As seen from the summit of Lion Mountain, elevation 13,100 feet. The lake is 3,600 feet below the peak. Extreme left T'u-bbu peninsula; separated by a channel is the island of Hle-wu-be; below it the island of Nyo-ro-p'u. At base of picture the village of Hli-ḳi on the small peninsula.

[p.410-K]



(Courtesy Nat. Geogr. Soc.)

PLATE 219. — SHIH-TZU-WAN OR LION'S COVE

獅子灣雲南永寧四川前所交界

This solid limestone mountain covered with scrub oak (*Quercus semicarpifolia*) is in Ch'ien-so territory, Ssu-ch'uan; the small stream flowing in front, is the Yün-nan (Yung-ning) — Ssu-ch'uan border Chinese squatters have settled in the cave.

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2: Rock K-5 (1934-)1947 AF16 Southwest China
AF16

●133
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[p.426 P]

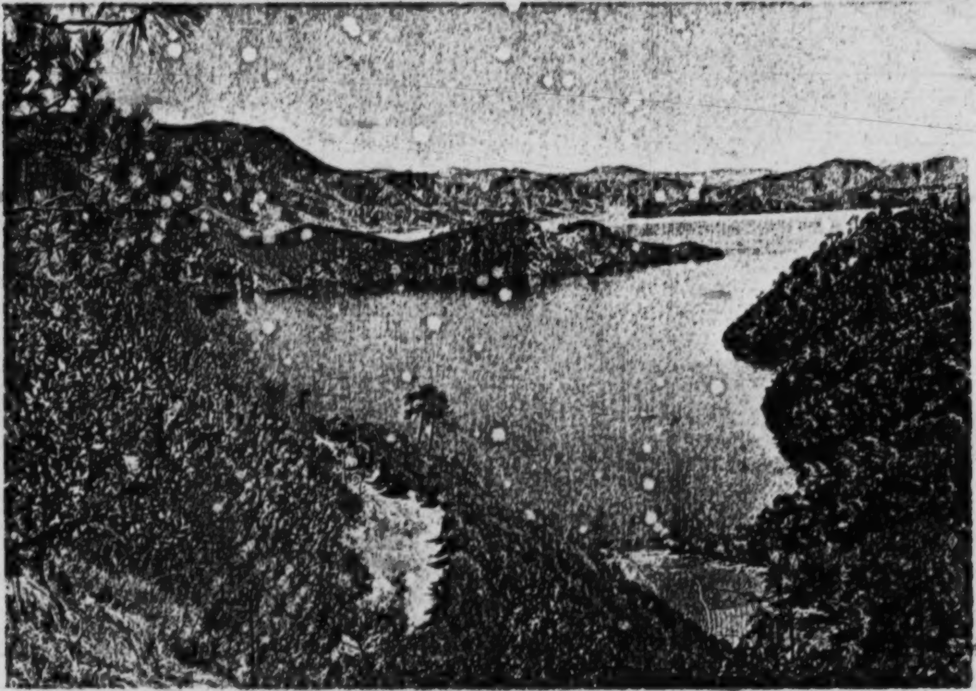


PLATE 240. — THE NORTHERN SHORE OF YUNG-NING LAKE

永寧瀘沽湖北岸，[illegible]

The trail in the foreground leads to the village of Hli-ki near the foot of Lion Mountain. The Yün-nan — Ssu-ch'uan border is beyond (east) the long, wooded peninsula. The trees covering the lake-encircling hills are mainly pines and oaks. Tso-so T'u-ssu territory in the background.

173 131 more adjacent to that territory, being separated by the district of Yung-ning].

The smaller district of to-day (1893). — "This proves that the district of Yen-yüan includes only parts of other districts and that its frontiers do not extend to those of ancient times. In fact it rules over only part of its former territory.

"The ancient people of Kua-pieh are called by the Ning-fan 寧番 the Shui-wai Sheng-fan 水外生番 (wild savages outside the river [either the Yangtze or the Ya-lung must be meant here]).[23] The people of Tso-so were Ma-la-fei's 馬剌非[24] peasants who were hated by Yung-ning. The Chung-so, Lang-ch'ü, and the Mu T'u-ssu of Li-chiang had disputes regarding boundary lines; the senior native officials of the above mentioned places had also occasional quarrels among themselves."

4. CONFIGURATION OF YEN-YÜAN

173 137 133 "Junipers[25] grow on all the lofty peaks of the district of Yen-yüan, giving the latter a blue-green tint. The dragon-like rivers flow zigzag over its land. This district is situated between the Yün-nan and Ssu-ch'uan boundaries and here the Chinese and tribespeople live in contact.

"The land of Chiung 邛 and of Chiang 絳 is related to this district in the same way as lips are to teeth, while the Liao and Man tribes are as near to it as the fingers to the arm.

"Its passes over the lofty peaks, covered with fragrant junipers, can safely be guarded by one man. Salt and copper are its chief natural resources.

"Yen-yüan is the capital and cross-road of the Chiu-so 九所 (Nine military sub-stations). [Under Chiu-so must be understood the Five *So*, as well as the chieftains of Kua-pieh, Ma-la, Ku-pe-shu and Mu-li.]

5. ACCOUNTS OF YEN-YÜAN AND ANCIENT PLACES

173 101 *No-chi.* — "The city of No-chi 諾濟 was west of Yen-yüan hsien. It was established during the T'ang dynasty. At the close of the period T'ien-pao 天寶 (751) it was captured by the T'u-fan. In the 15th year of Cheng-yüan

---

[23] The Ning-fan are the inhabitants of Ning-fan Wei. The region was surrounded by the Hsi-fan tribe who dwelled there, therefore the Military Station of Ning-fan was called Ning-fan ch'eng 城. All the inhabitants were known as Ning-fan-man.

During the Yüan dynasty there was established a fu-city which was called Su chou 蘇州 in the wild parts of Chiung-tu 邛都. A native (Mongol) official of that region, by the name of Yüeh-lu-t'ieh-mu-erh 月魯帖木兒, rebelled, and there was then established the Military Station of Ning-fan. This was in the 27th year of Ming Hung-wu (1394).

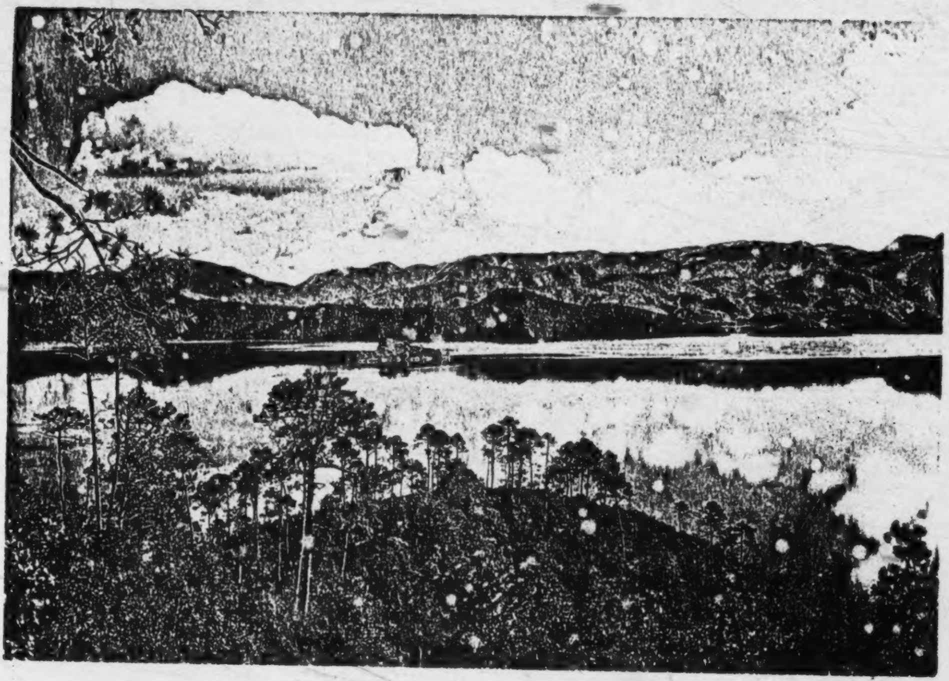
Su chou was the territory at present governed by Mien-ning hsien. Ning-fan Wei was governed by the Ssu-ch'uan Hsing-tu-ssu 行都司. There were two classes of Fan savages — Sheng-fan (wild, raw, savages) and Shu-fan 熟番 (the ripe savages who had submitted to Chinese rule).

[24] This should read La-ma-fei, he was the son of La-t'a or La-wu, who ruled over the Tso-so territory 300 li south-west of Yen-yüan hsien.

[25] Probably *Juniperus Wallichiana* or *J. formosana.*

AF16

[p. 458 c]



(Courtesy Nat. Geogr. Soc.)

PLATE 243. — THE YUNG-NING LAKE WITH THE ISLAND OF NYO-RO-P'U

永寧瀘沽湖望東面，湖中木墓島

Looking east from the pine covered hills encircling the west shore of the lake. Beyond Nyo-ro-p'u is the long peninsula called T'u-bbu; separated from the latter by a channel is the island of Hli-wu-be. The mountains in the distance (center) are in Tso-so land, Ssu-ch'uan.

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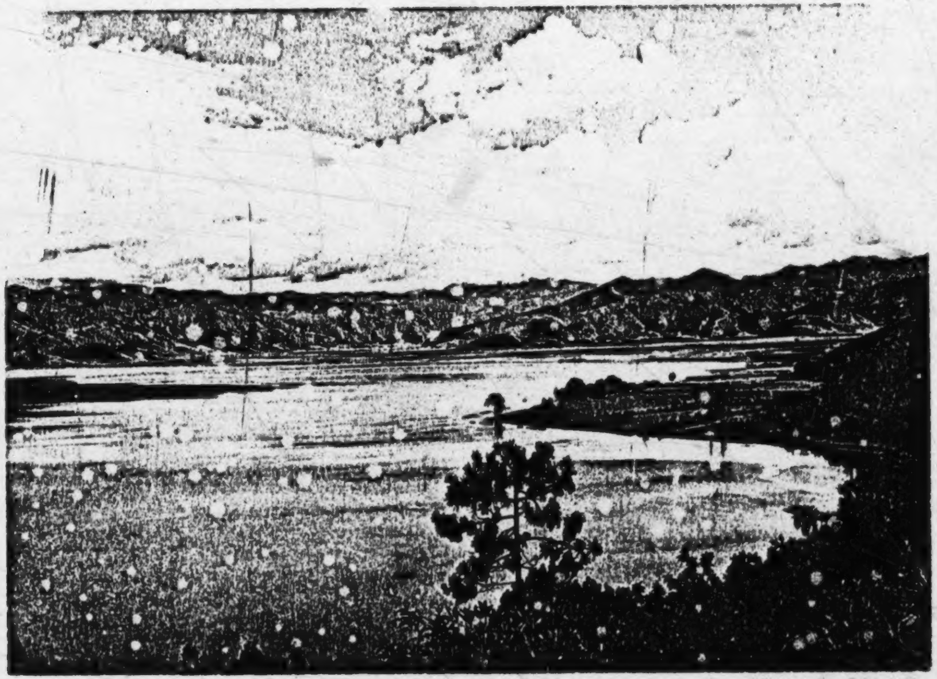
2: Rock K-5 (1934-) 1947 AF16 Southwest China AF16

[p.458-J]



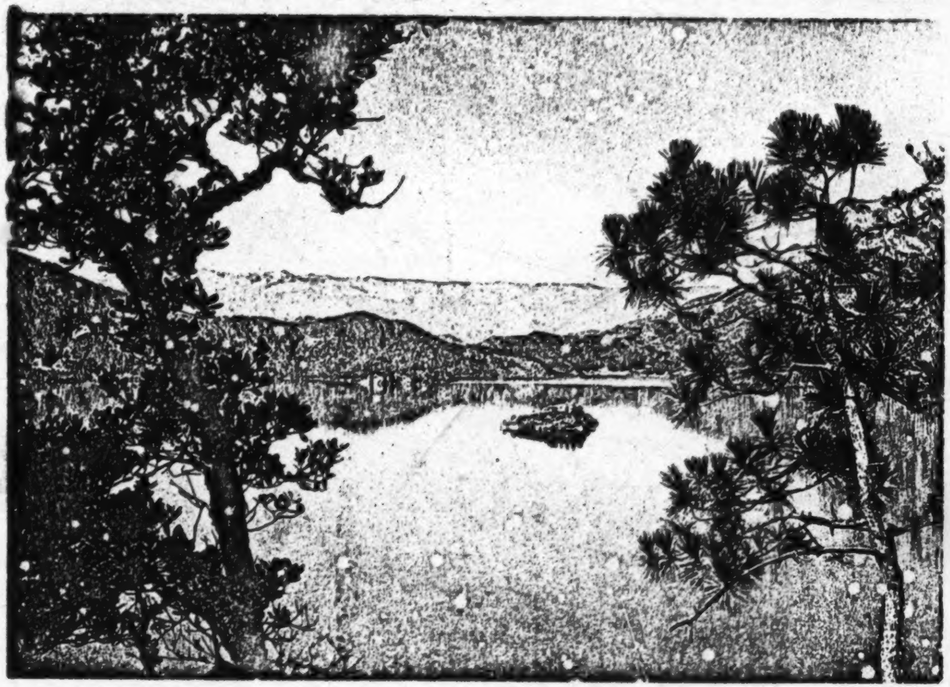
(Courtesy Nat. Geogr. Soc.)

PLATE 250. — THE SOUTHEASTERN END OF YUNG-NING LAKE

永寧瀘沽湖東南岸左所境背景

The outlet of the lake is through the broad valley in the Tso-so mountains in the distance. The little village on the lake shore beyond the first bay is in Yün-nan. Pines in foreground.

[p.458-K]



(Courtesy Nat. Geogr. Soc.)

PLATE 251. — YUNG-NING LAKE AND NYO-RO-P'U ISLAND AS SEEN FROM THE T'U-BBU PENINSULA

自永寧瀘沽湖上布牛島望西面，湖中木若島

Looking west from T'u-bbu, Nyo-ro-p'u appears like a majestic liner floating on a calm sea. Left Oak (*Quercus semicarpifolia*; right *Pinus yünnanensis*.

2: Rock
487, 491, 133, 101, 361

AF 16 Southwest China AF 16

[Chart of Pagination on End Maps I, II, III, IV.]

A	B
C	D
E	F
G	H

CHINA 1:500,000

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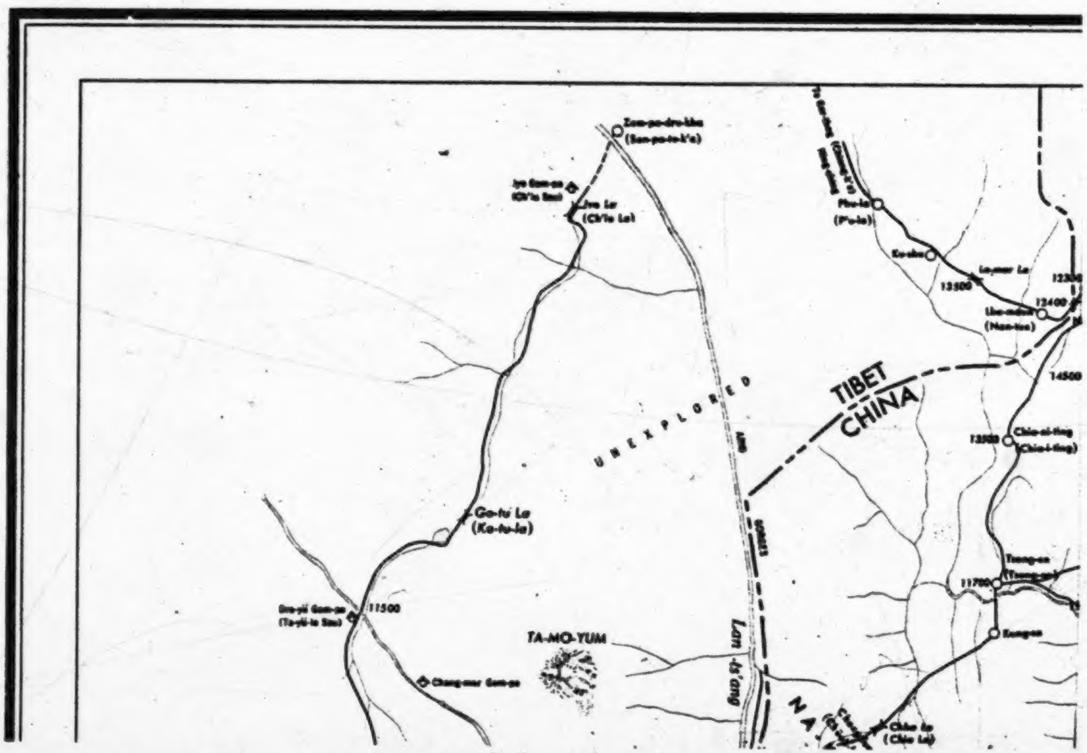
361
•133
491

TE-CH'IN

[End map I A]


Zom-po-dro-kha
(San-po-to-k'a)
Jyo Gom-pa
(Ch'ia Ssu)
Jyo La
(Ch'ia La)
UNEXPLORED
TIBET
CHINA
Pho-la
(P'u-la)
Laymar La
13500
12400
14500
Chia-ai-ting
(Chia-i-ting)
13500
Go-tu La
(Ko-tu-la)
Dra-yi Gom-pa
(Ta-yi-la Ssu)
11500
Chang-mar Gom-pa
TA-MO-YUM
Lan ts'ang
NA
Tsong-an
11700
Chho La
(Chio La)

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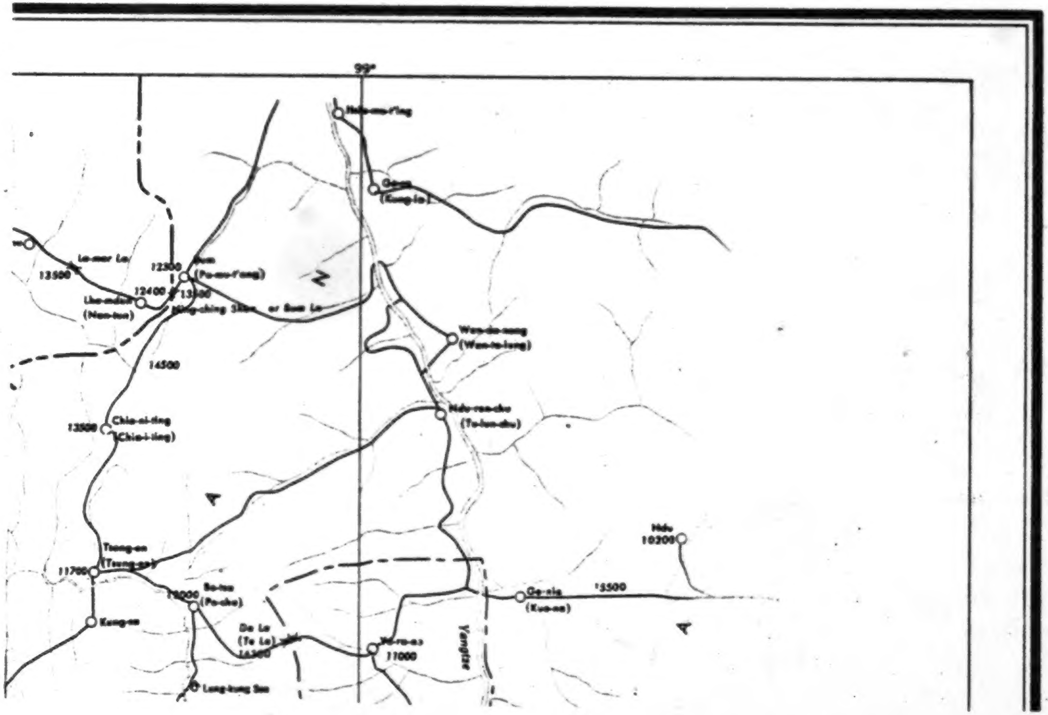
E-CH'IN

FIRST EDITION—AMS 1

SHEET I OF IV
A.M.S. L406


99°
La-mar La
13500
12300
12400
13500
(Nan-tun)
14500
Chia-ai-ting
13500
(Chia-i-ting)
(Kung-la)
Wan-da-sang
(Wan-ta-lang)
(Tu-lun-chu)
Tsung-an
11700
Kung-an
Ba-tsa
12000
(Pa-cho)
Da La
(Te La)
16300
11000
Lung-kung Ssu
Yangtze
Ge-nia
(Kua-an)
15500
Hdu
10200
N
A
A

[End map I B]

2: Rock K-5 (1934-)1947 AF16 Southwest China AF16

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● 133
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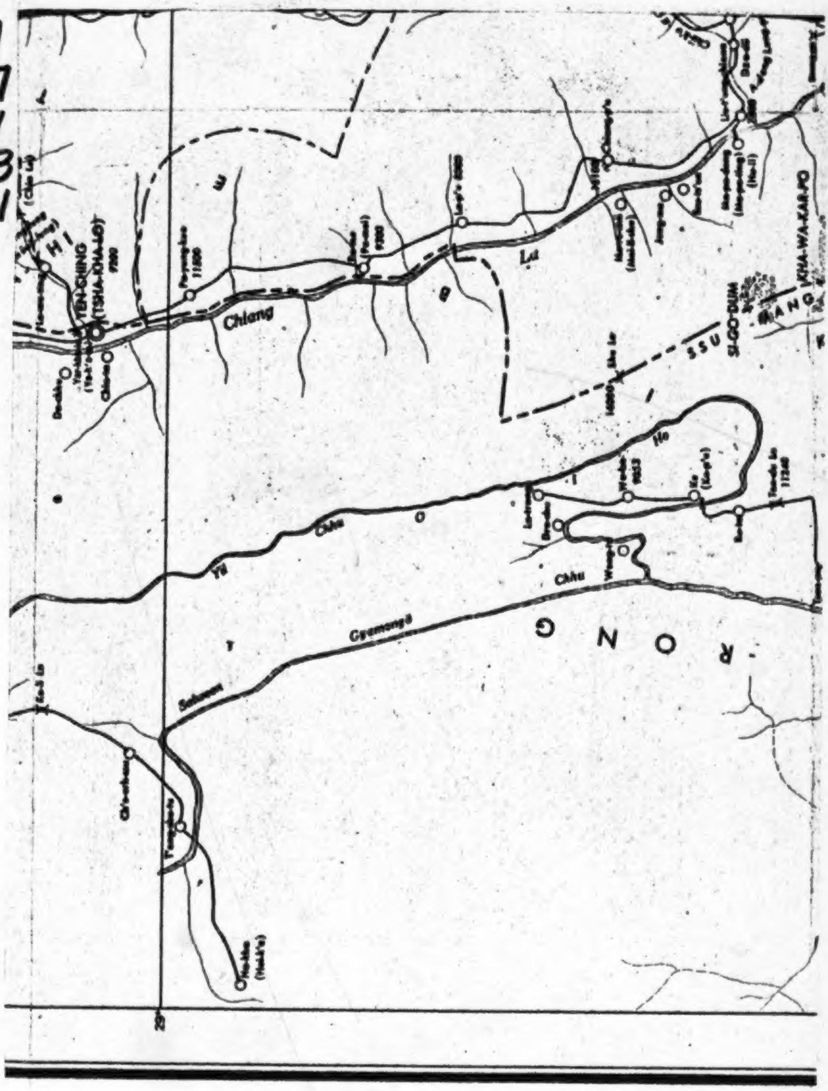
YEN-CHING
(TSHA-KHA-LO)
9200
Chiang
Lu
Yü
Chhu
O
Ho
Chhu
Salween
R O N G
SSU
SI-GO-DUM
KHA-WA-KAR-PO
29°

[End map I C]

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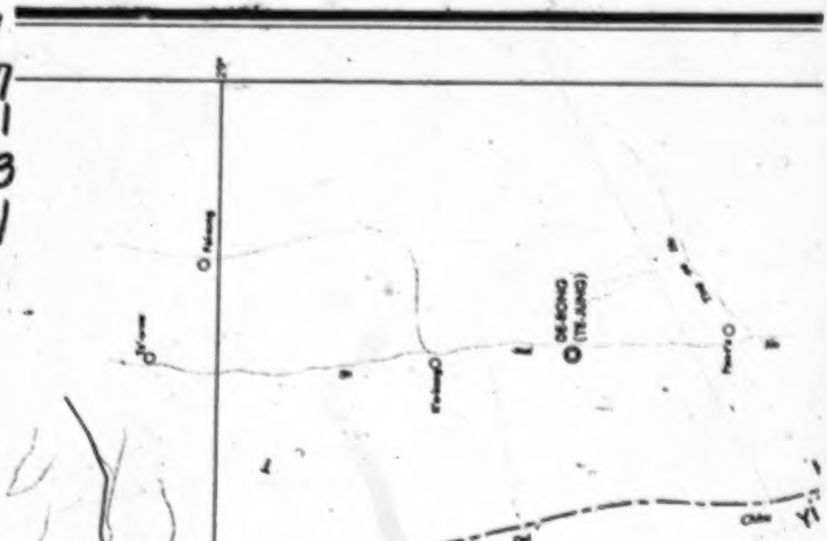
361
● 133
491


HSI-K'ANG PROVINCE
YUN-NAN PROVINCE
DE-RONG
(TE-JUNG)

[End map I D]

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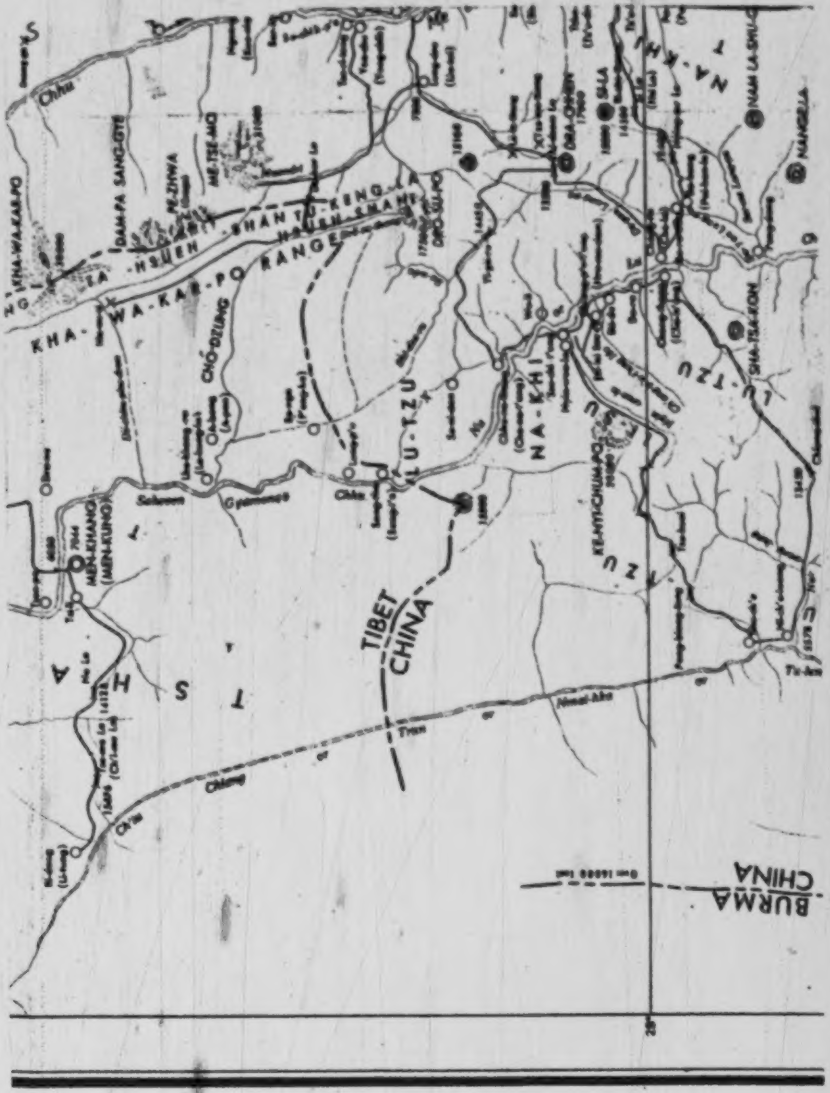
KHA-WA-KAR-PO
DAM-PA SANG-GYE
PE-ZHWA
ME-TSE-MO
KHA-WA-KAR-PO RANGE
LA-HSUEH SHAN
CHÖ-DZUNG
MEN-KHANG
(MEN-KUNG)
Salween
T S H A
TIBET
CHINA
LU-TZU
NA-KHI
KE-NYI-CHUM-PO
DRO-SU-PO
DRA-CHHEN
SI-LA
NAM LA-SHU-G
NANGE-LA
SHA-TSA-KON
LU-TZU
NA-KHI
BURMA
CHINA
28°

[End map I E]

2: Rock K-5 (1934-)1947 AF16 Southwest China AF16

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● 133
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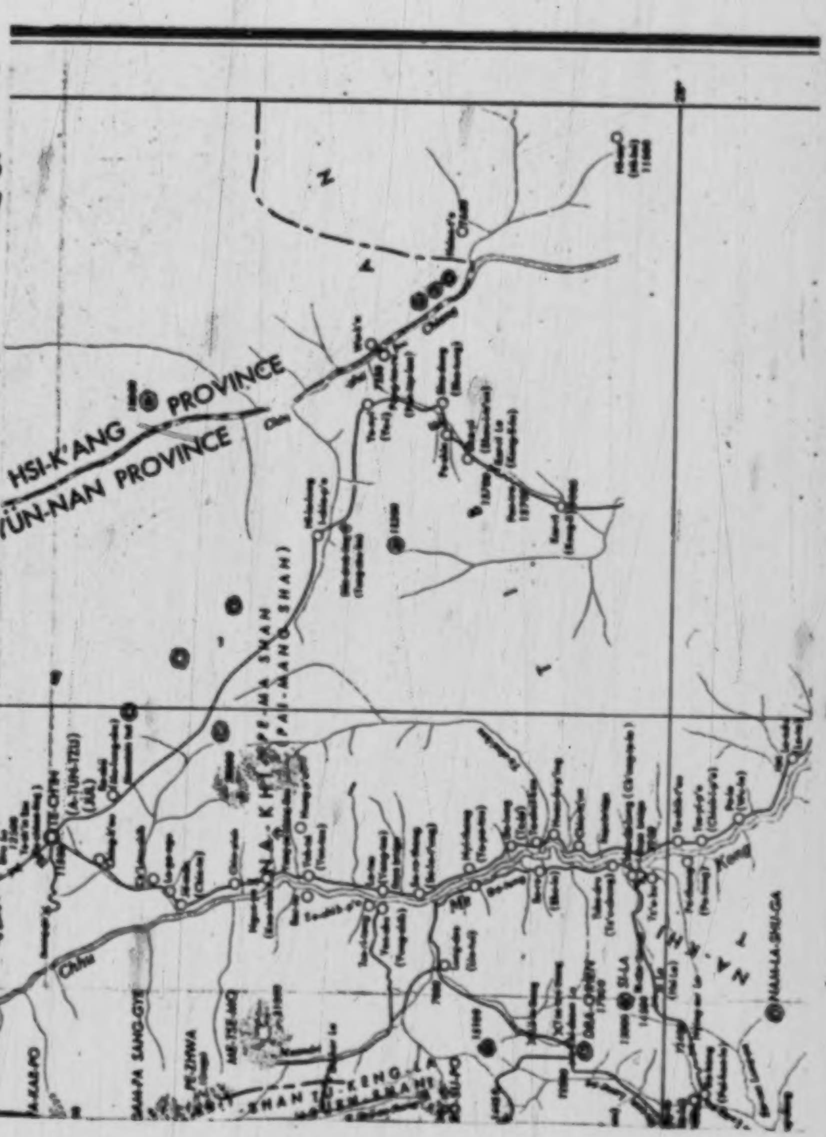
HSI-K'ANG PROVINCE
YÜN-NAN PROVINCE
TE-CH'IN
(A-TUN-TZU)
(JÜ)
N A - K H I
PE-MA SHAN
(PAI-MANG SHAN)
DRA-CHHEN
SI-LA
NA-KHI
NAM-LA-SHU-GA
PE-ZHWA
ME-TSE-MO
DAM-PA SANG-GYE
A-KAR-PO
SHAN TU-KENG-LA
Chhu
Z
A
T

[End map I F]

2: Rock K-5 (1934-)1947 AF16 Southwest China AF16

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● 133
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CH'I-H
LI-SU
(Yu-lo-kung)

A.M.S. L406

First Edition (A.M.S. 1), 1946

Prepared under the direction of the Chief of Engineers by the Army Map Service (AMPT), U. S. Army, Washington, D. C. Redrafted from original maps compiled in 1946 by J. F. Rock, from original surveys 1922, 1933 and from surveys by Major H. R. Davies 1898, Captain F. M. Bailey 1911, Dr. H. Handel-Mazzetti 1914-16, Eric Teichman 1922.

Scale 1:500,000 (Approximat

3 0 3 6 9 12
10 0 10 20 30 40

PROJECTION LINES ARE APPRC

LEGEND

BOUNDARIES
International
Province
Territorial or tribal
Road or trail
Unsurveyed trail
District town
Village
Lolo settlement
Camp site
Lamasery
Mountain hut
Shrine, Mission, Temple
Airfield
Pass
Cave

Peak with spot height in feet
Peak with glacier
Gorge
Ferry
Chain bridge
Chain bridge (destroyed)
Rope bridge
Small wooden bridge
Unexplored stream
Disappearing stream
Hot spring
Lake
Island in river
Sinter terrace

APPROXIMATE_HEIGHTS IN

[End-map I G]

2: Rock K-5 (1934-)1947 AF16 Southwest China AF16

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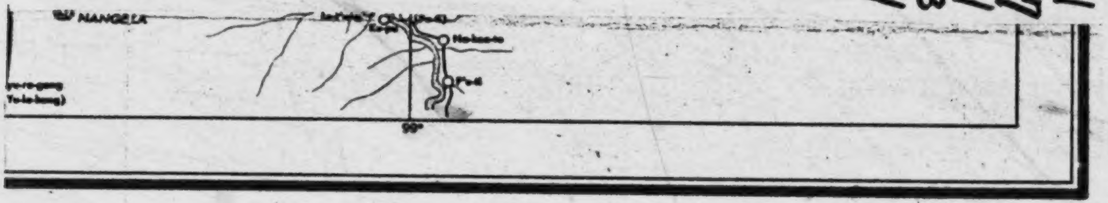


ARMY MAP SERVICE, U. S. ARMY, WASHINGTON, D.C., 144302
1947

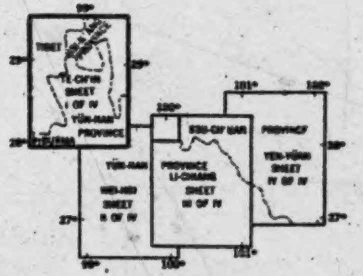
Scale 1:500,000 (Approximate)

3 6 9 12 15 Miles
10 20 30 40 50 Li

CTION LINES ARE APPROXIMATE

PROXIMATE HEIGHTS IN FEET

INDEX TO SHEETS


TIBET
TE-CH'IN SHEET I OF IV
YÜN-NAN PROVINCE
WEI-HSI SHEET II OF IV
LI-CHIANG SHEET III OF IV
SSU-CH'UAN PROVINCE
YEN-YÜAN SHEET IV OF IV
99°
100°
101°
102°
27°
28°
29°

TE-CH'IN (A-TUN-TZU), CHINA

N2750-E9800/150x130

[End map I H]

CHINA 1:500,000

WEI-HSI

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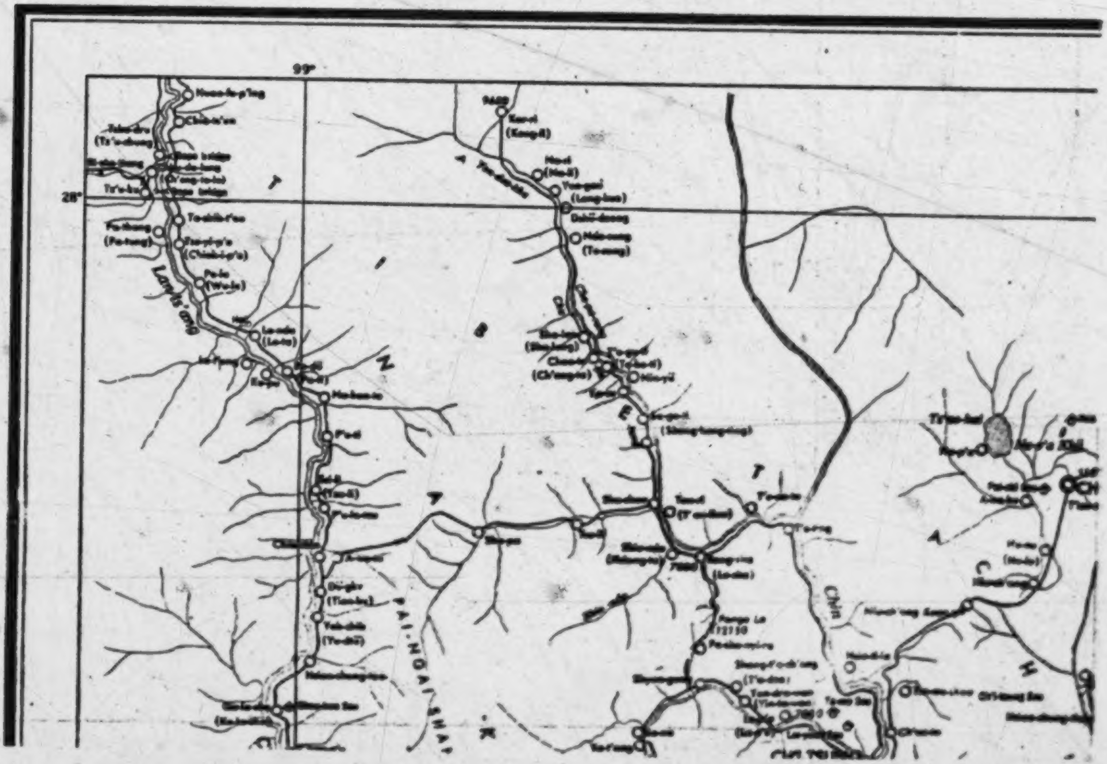
FIRS


99°
28°
PAI-NGAI SHAN

2: Rock K-5 (1934-)1947 AF16 Southwest China AF16

[End map II A]

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WEI-HSI

FIRST EDITION—AMS 1

SHEET II OF IV

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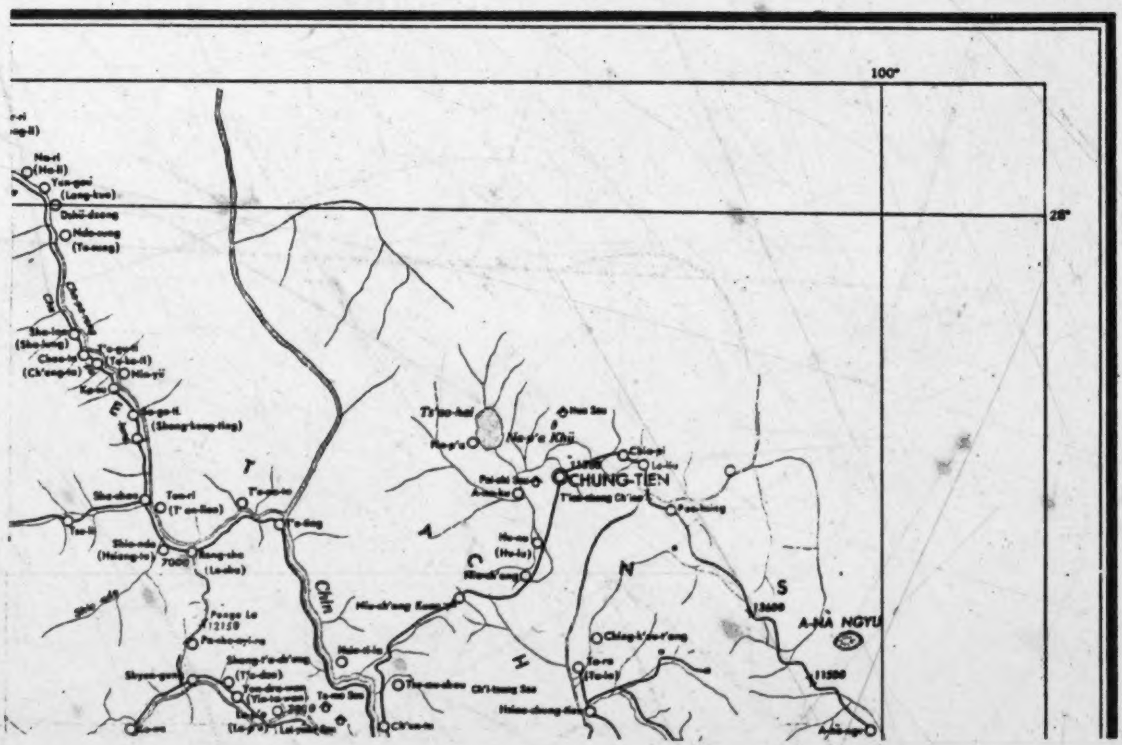
100°
28°
CHUNG-TIEN
A-NA NGYU
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[End map II B]

2: Rock K-5 (1934-)1947 AF16 Southwest China AF16

2: Rock K-5 (1934-)1947 AF16 Southwest China AF16

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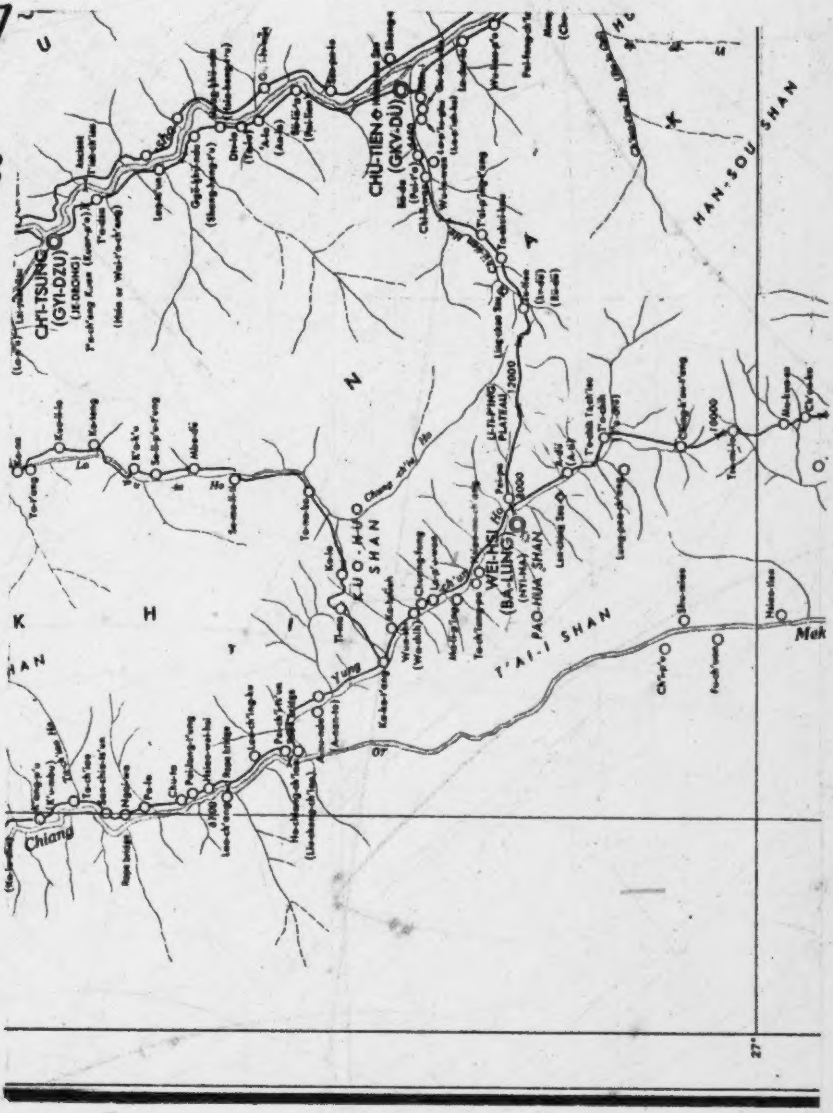

CH'I-TSUNG
(GYI-DZU)
(JE-DRONG)
Ancient
CHU-TIEN
(GKV-DÜ)
KUO-HUO SHAN
WEI-HSI
(BA-LUNG)
(NYI-NA)
PAO-HUA SHAN
LI-TI-P'ING PLATEAU
12000
10000
T'AI-I SHAN
HAN-SOU SHAN
Chiang
Rope bridge
Yung
Ho
Mek
K
H
N
A
U
27°

[End map II C]

2: Rock K-5 (1934-)1947 AF16 Southwest China AF16

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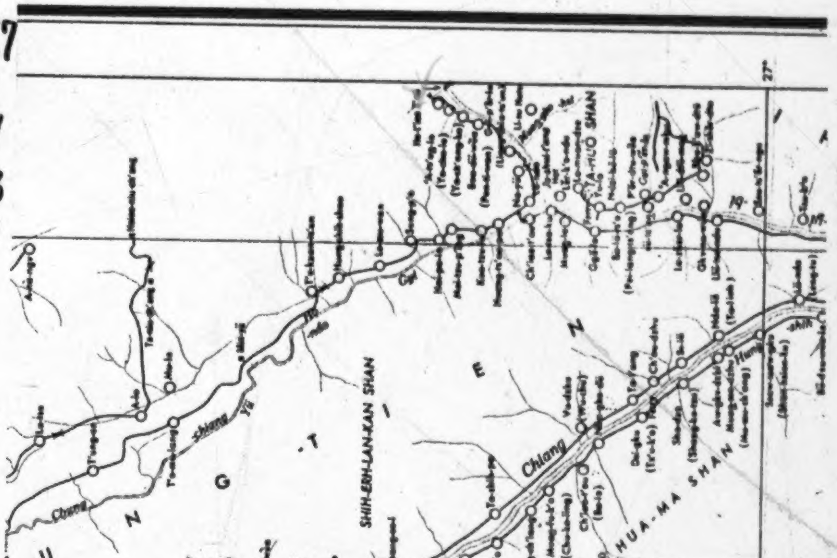
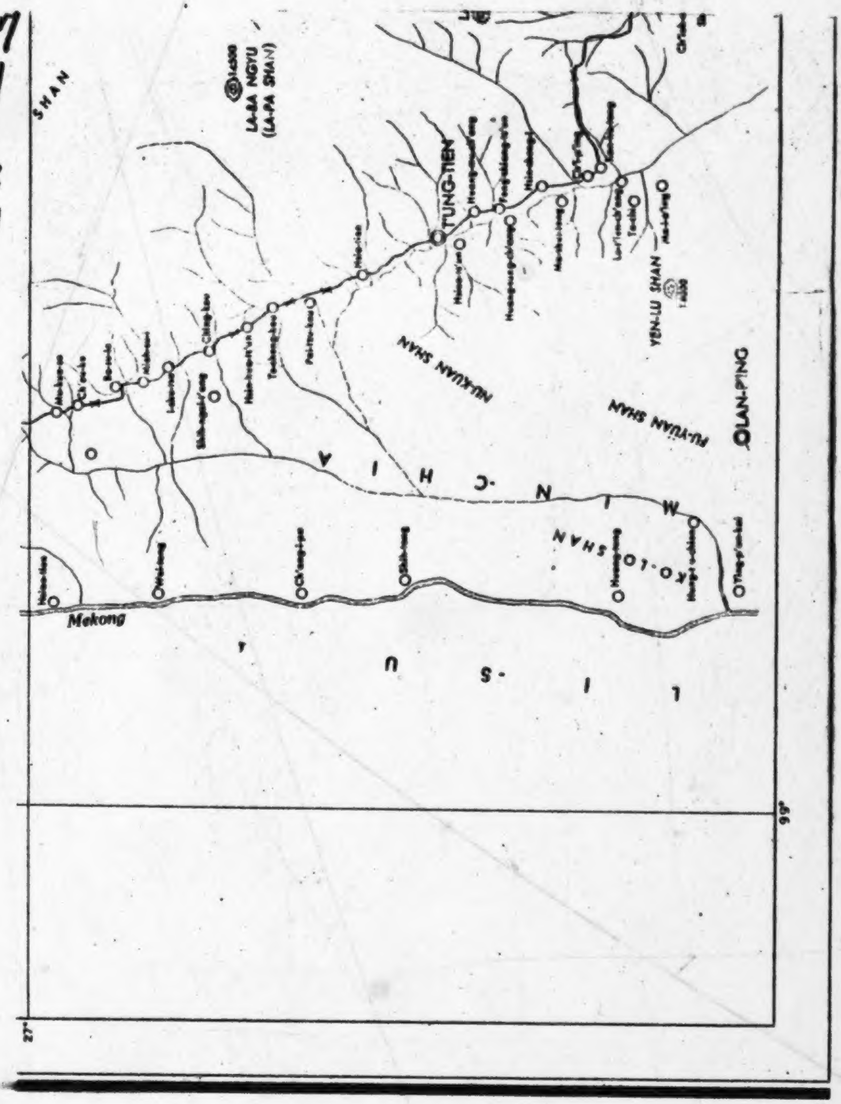
• 133
491


CH'I-TSUNG
(GYI-DZU)
(JE-DRONG)
CHU-TIEN
(GKV-DÜ)
SHIH-ERH-LAN-KAN SHAN
HUA-MA SHAN
HAN-SOU SHAN
TA-HUO SHAN
LI-TI-P'ING PLATEAU
Chiang
U N G T I E N
N A
27°
12000
10000

[End map II D]

2: Rock K-5 (1934-)1947 AF16 Southwest China AF16

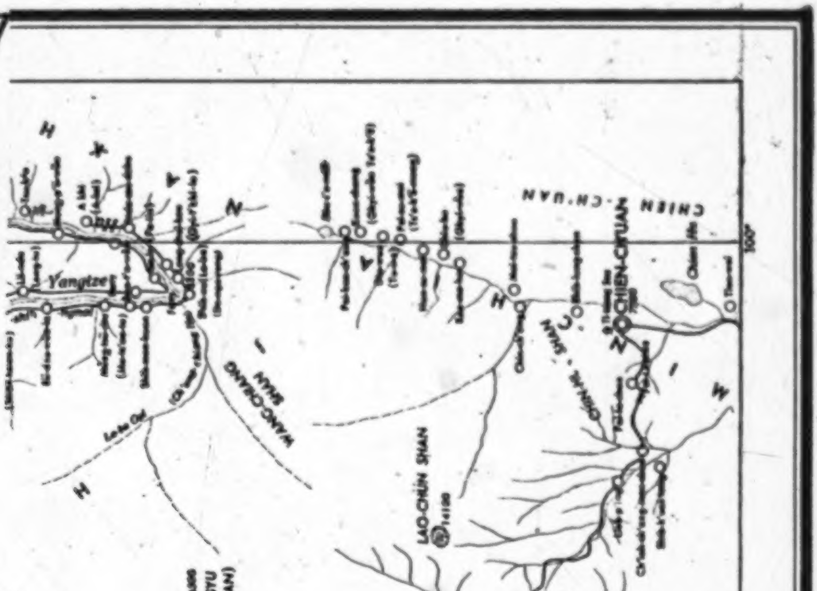
487
101
361
● 133
491



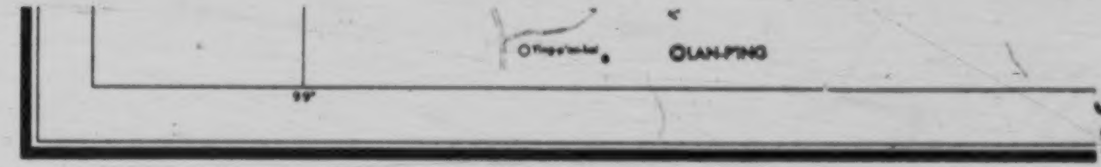
27°
99°
SHAN
LA-BA NGYU
(LA-PA SHAN)
TUNG-TIEN
NU-KUAN SHAN
FU-YÜAN SHAN
YEN-LU SHAN
LAN-PING
MIN-CHIA
KO-LO SHAN
Mekong
LI-SU

[End map II E]

487
101
361
133
491


Yangtze
WANG-CHIANG SHAN
LA-BA NGYU
(LA-PA SHAN)
14300
LAO-CHÜN SHAN
14100
TUNG-TIEN
CHIN-HUA SHAN
CHIEN-CH'UAN
CHIEN-CH'UAN
HU-KUAN SHAN
YEN-LU SHAN
FU-YÜAN SHAN
LAN-PING
100°

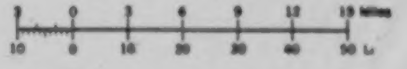
[End map II F]


Ting-p'an-kai
LAN-P'ING
99°

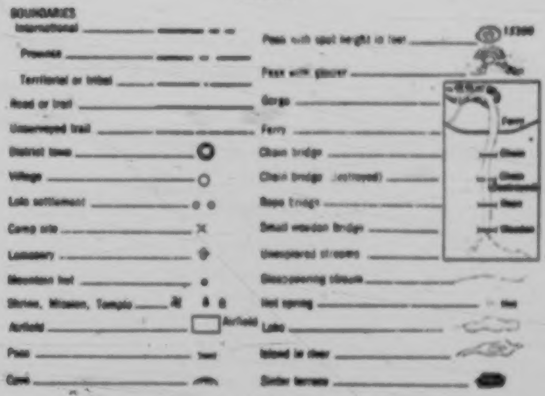
A.M.S. L406
First Edition (A.M.S. 1), 1946

Prepared under the direction of the Chief of Engineers by the Army Map Service (AMPT), U. S. Army, Washington, D. C. Redrafted from original maps compiled in 1945 by J. F. Rock, from original surveys 1923, 1928, 1930 and from surveys by Major H. R. Davies 1895, Dr. H. Handel—Mazzetti 1914-16.

Scale 1:500,000 (Approximate)


3
0
3
6
9
12
15 Miles
10
0
10
20
30
40
50 Li

LEGEND


BOUNDARIES
International
Province
Territorial or tribal
Road or trail
Unsurveyed trail
District town
Village
Lolo settlement
Camp site
Lamasery
Mountain hut
Shrine, Mission, Temple
Airfield
Airfield
Pass
Cave
Peak with spot height in feet
13300
Peak with glacier
Gorge
Ferry
Chain bridge
Chain bridge (destroyed)
Rope bridge
Small wooden bridge
Unexplored streams
Disappearing stream
Hot spring
Lake
Island in river
Sinter terraces
Ferry
Chain
Chain
Rope
Wooden

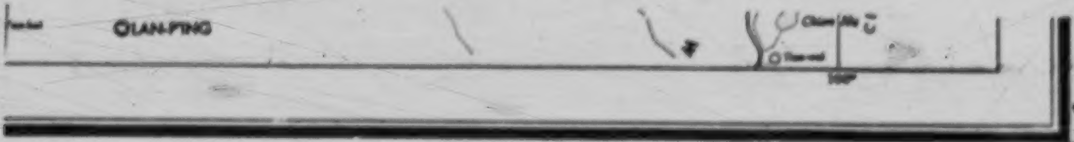
PROJECTION LINES ARE APPROXIMATE

APPROXIMATE HEIGHTS IN FEET

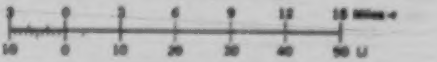
491
• 133
487
101
361

[End map II G]

2: Rock K-5 (1934-)1947 AF16 Southwest China AF16


LAN-PING
100°

Scale 1:500,000 (Approximate)


3
0
3
6
9
12
15 Miles
10
0
10
20
30
40
50 Li

PROJECTION LINES ARE APPROXIMATE

APPROXIMATE HEIGHTS IN FEET

ARMY MAP SERVICE, U. S. ARMY, WASHINGTON, D. C. [illegible]

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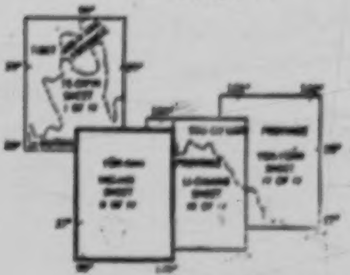


WEI-HSI, CHINA

N2625-E9850/145x120

491
•133
487
101
361

2: Rock K-5 (1934-)1947 AF16 Southwest China AF16

[End map II H]

CHINA 1:500,000

LI-CHIANG

TSO-SO TERRITORY
YUNG NING
TERRITORY
Scale 1:110,000 (Approximate)
PROVINCE
ZHER-KHIN

491
•133
487
101
361

2: Rock K-5 (1934-)1947 AF16 Southwest China AF16

[End map III A]

LI-CHIANG

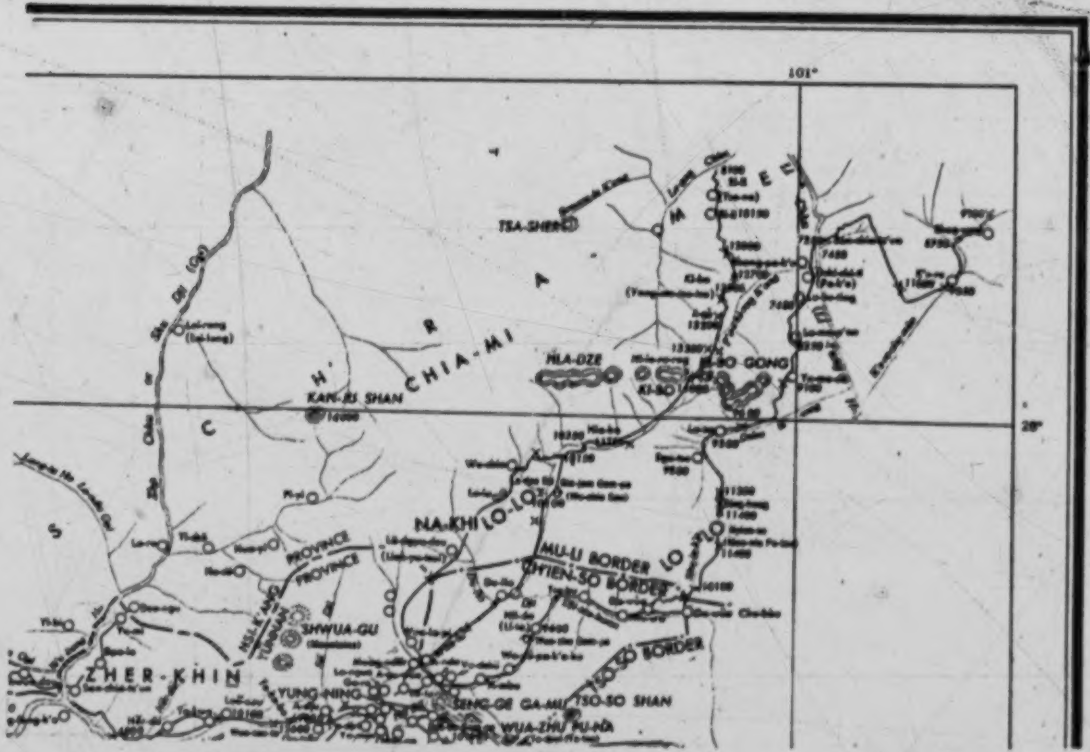
FIRST EDITION—AMS 1

SHEET III OF IV

A.M.S. L406

491
•133
487
101
364

[End map III B]



101°
28°
H
R
A
C
S
E
CHIA-MI
KAN-RS SHAN
14000
TSA-SHER
HLA-DZE
KI-BO
BO-GONG
NA-KHI
LO-LO
LO
MU-LI BORDER
CHIEN-SO BORDER
PROVINCE
PROVINCE
HSI-K'ANG
YUNNAN
SHWUA-GU
ZHER-KHIN
YUNG-NING
SENG-GE GA-MI
TSO-SO SHAN
TSO-SO BORDER
WUA-ZHU PU-NA

9: Rock K-5 (1934-)1947 AF16 Southwest China AF16

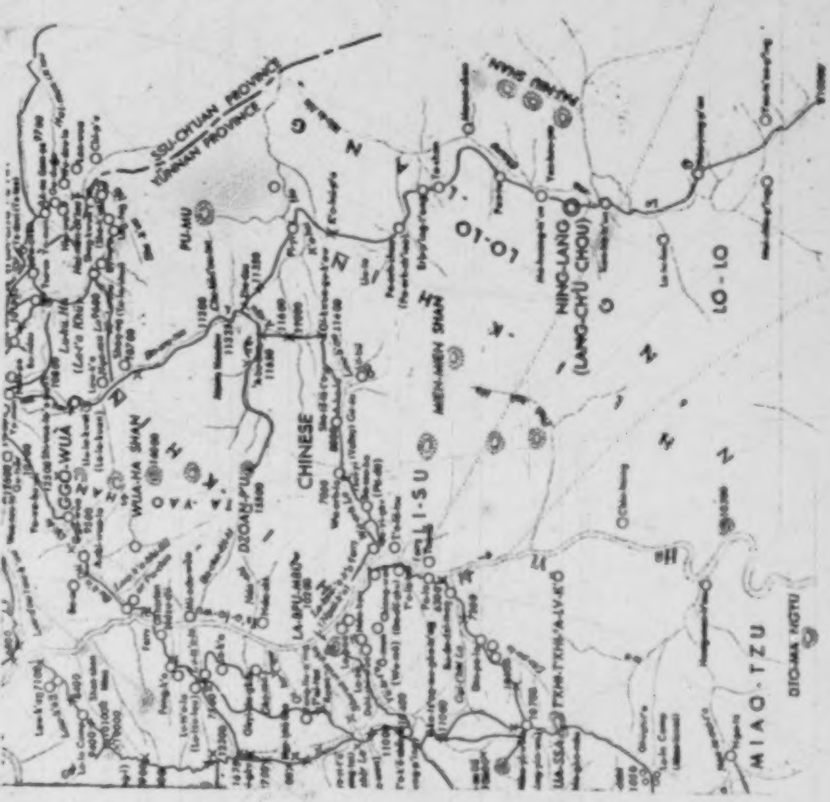
491
•133
487
101
361

LI-SU
CHINESE
NA-KHI
NA-KHI
MIAO-TZU
TA-BA PEAK

[End map III C]

2: Rock K-5 (1934-)1947 AF16 Southwest China AF16

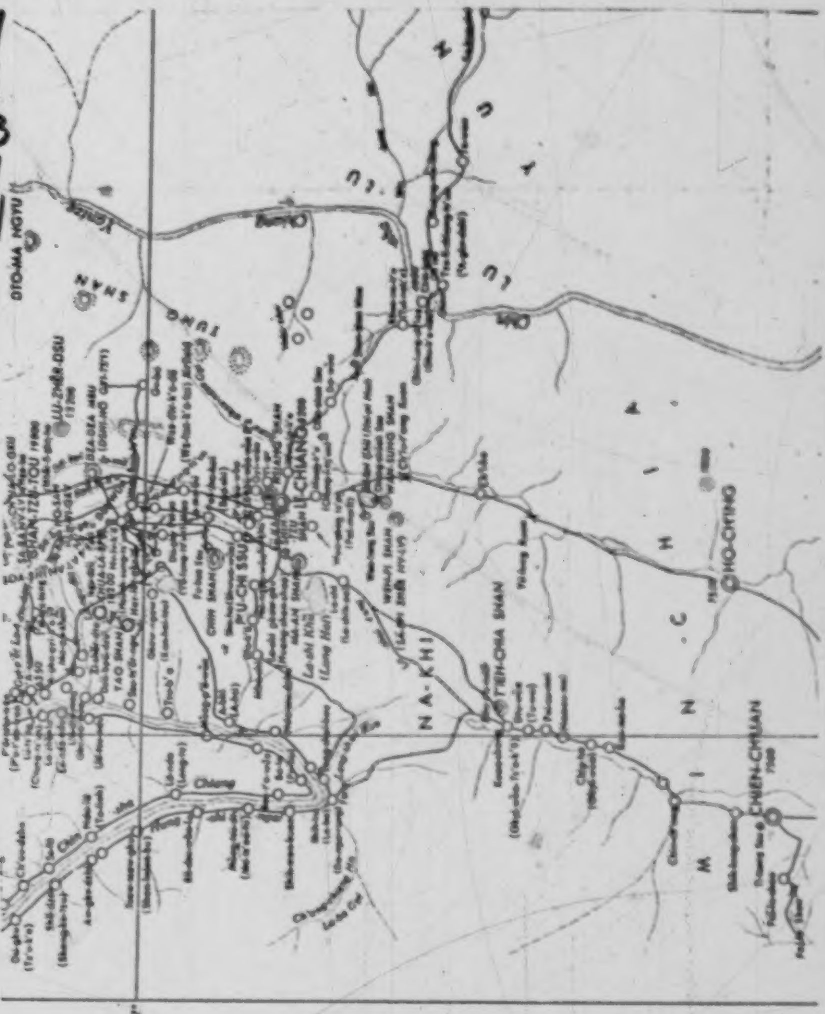
491
•133
487
101
361


GGÖ-WUÀ
WUA-HA SHAN
TA-YAO
DZOAN-PU
LA-BPU-MBU
CHINESE
LI-SU
MEN-MEN SHAN
PU-MU
SSU-CH'UAN PROVINCE
YÜNNAN PROVINCE
LO-LO
NING-LANG
(LANG-CH'Ü CHOU)
LO-LO
MIAO-TZU
DTO-MA NGYU

[End map III D]

2: Rock K-5 (1934-)1947 AF16 Southwest China AF16

487
491
● 133
101
361



DTO-MA NGYU
LU-ZHĚR-DSU
SHAN-TZU-TOU
TUNG SHAN
Yangtze
TAO SHAN
CHIN SHAN
PU-CHI SSU
LI-CHIANG
Lashi Khi
WEN-PI SHAN
NA-KHI
T'IEH-CHIA SHAN
HO-CHING
CHIEN-CHUAN
M I N . C H I A
Chiang
27°

[End map III E]

1. Rock K-5 (1934-)1947 AF16 Southwest China AF16

487
491
•133
101
361

DTO-MA NGYU
HÊR-DSU
SHAN
TUNG
YUNG-SHENG
(YUNG-PEI)
LU

[End map III F]

487
491
•133
101
361

2: Rock K-5 (1934-)1947 AF16 Southwest China AF16

CHIEN-CH'UAN
7500
100°

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First Edition (A.M.S. 1), 1946

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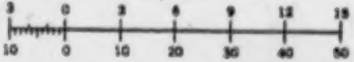
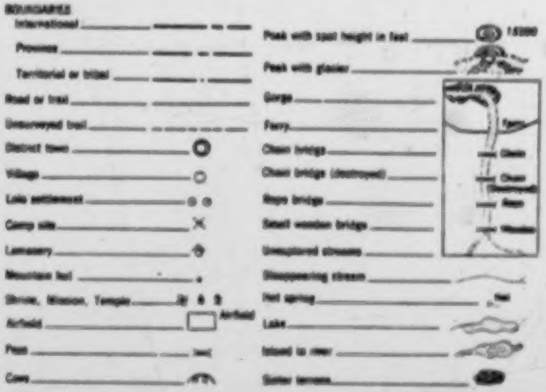
Scale 1:500,000 (Approximate)


3
0
3
6
9
12
15
10
0
10
20
30
40
50

PROJECTION LINES ARE APPROXIMATE

LEGEND


BOUNDARIES
International
Province
Territorial or tribal
Road or trail
Unsurveyed trail
District town
Village
Lolo settlement
Camp site
Lamasery
Mountain hut
Shrine, Mission, Temple
Airfield
Airfield
Pass
Cave
Peak with spot height in feet
15000
Peak with glacier
Gorge
Ferry
Chain bridge
Chain bridge (destroyed)
Rope bridge
Small wooden bridge
Unexplored streams
Disappearing stream
Hot spring
Lake
Island in river
Sinter terraces
Ferry
Chain
Chain
Rope
Wooden
Hot

APPROXIMATE HEIGHTS IN FEET

[End map III G]

3: Rock K-5 (1934-)1947 AF16 Southwest China AF16

487
491
•133
101
364

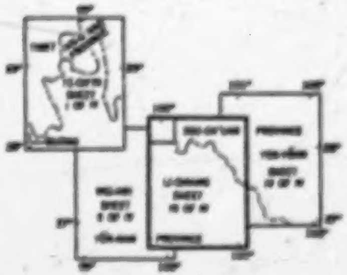
ARMY MAP SERVICE, U. S. ARMY, WASHINGTON, D. C. [illegible]

Scale 1:500,000 (Approximate)

3 0 3 6 9 12 15 Miles

10 0 10 20 30 40 50 Li

INDEX TO SHEETS



PROJECTION LINES ARE APPROXIMATE

[End map III H]

APPROXIMATE HEIGHTS IN FEET

LI-CHIANG, CHINA

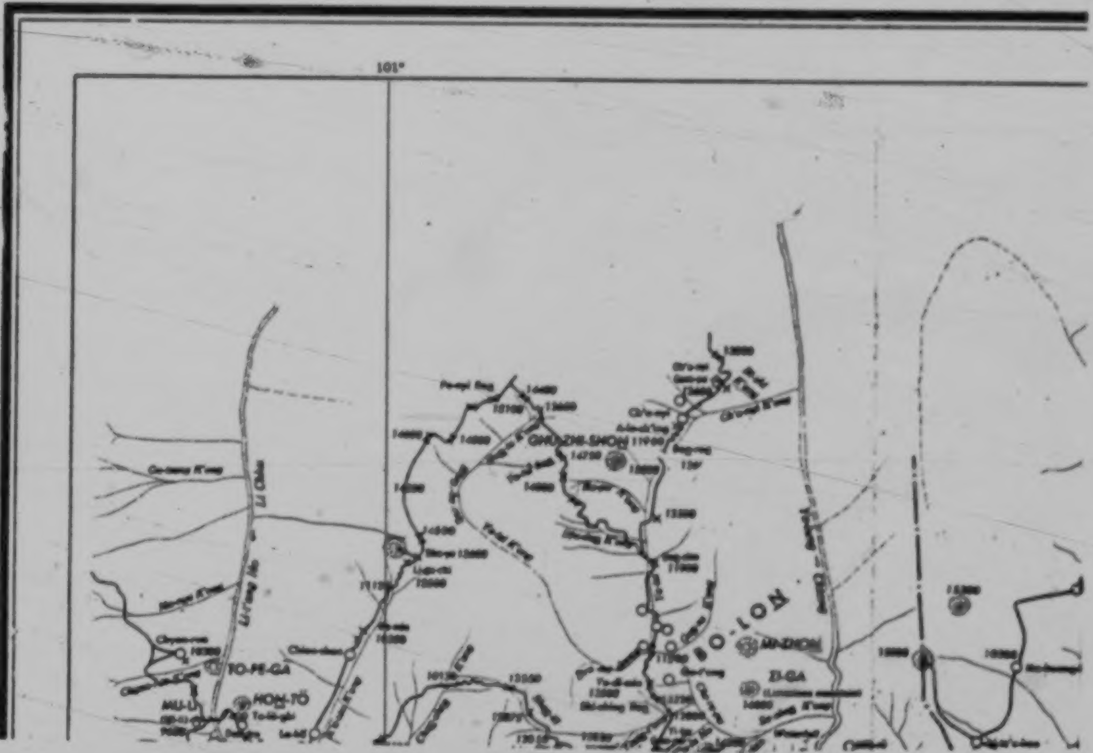
N2630-E9950/145x110

CHINA 1:500,000

YEN-YUAN

487
491
•133
101
361

2: Rock K-5 (1934-)1947 AF16 Southwest China AF16



101°
GHU-ZHI-SHOH
TO-PE-GA
HON-TÖ
MU-LI
BO-LON
ZI-GA

[End map IV A]

487
491
133
101
361

YEN-YUAN

FIRST EDITION—AMS 1

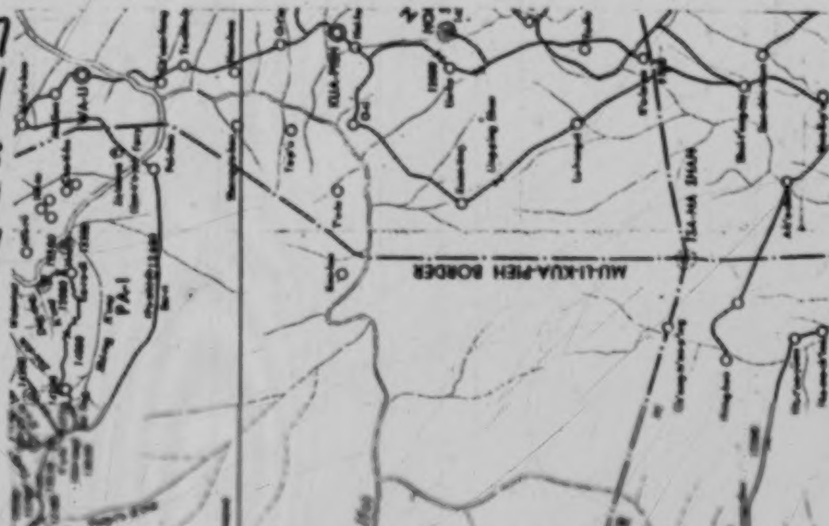
SHEET IV OF IV
A.M.S. L406

[End map IV B]

2: Rock K-5 (1934-)1947 AF16 Southwest China AF16

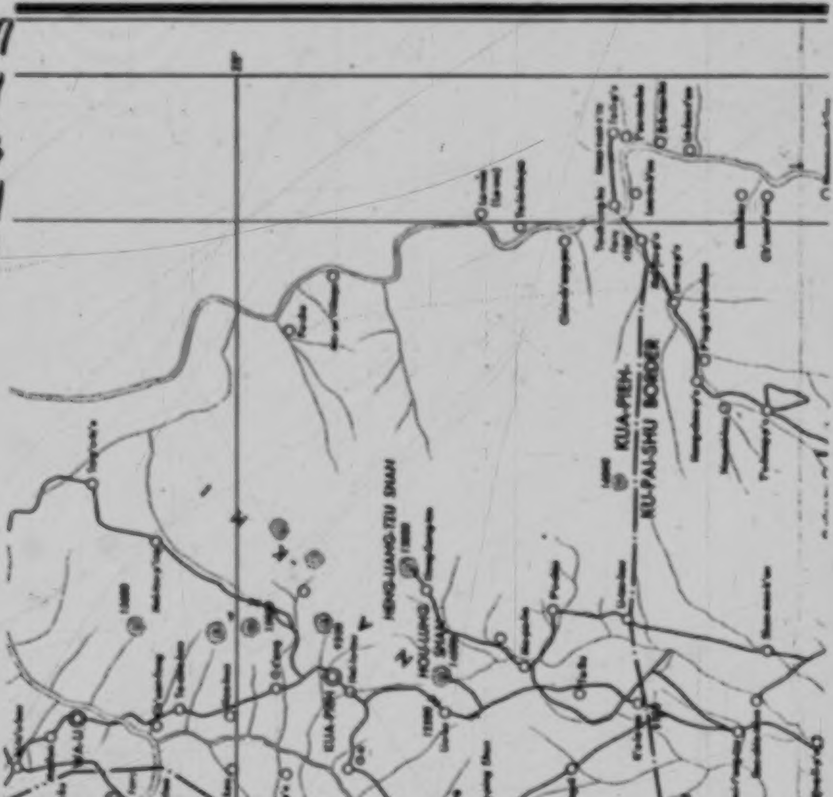
2: Rock K-5 (1934-)1947 AF16 Southwest China AF16

487
491
● 133
101
361


WA-U
PA-I
KUA-PIEH
MU-LI-KUA-PIEH BORDER
TSA-MA SHAN
MU-LI TSO-SO BORDER
CH'RA ME
CHUNG-CHIA
Li Chiu (Li-Fang Ho)
PA-I

[End map IV C]

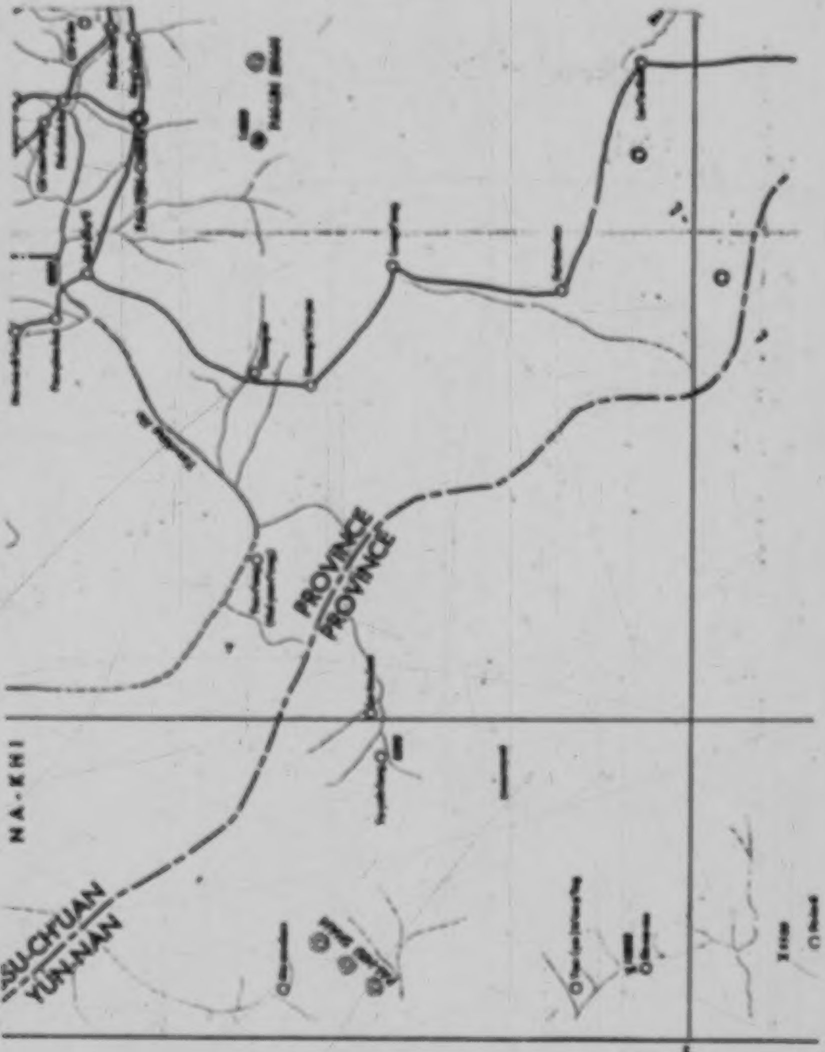
487
491
•133
101
361


PA-I
WA-U
KUA-PIEH
HENG-LIANG-TZU SHAN
HOU-LUNG SHAN
KUA-PIEH-
KU-PAI-SHU BORDER
MU-LI-KUA-PIEH BORDER
TSA-NA SHAN

[End map IV D]

2: Rock K-5 (1934-)1947 AF16 Southwest China AF16

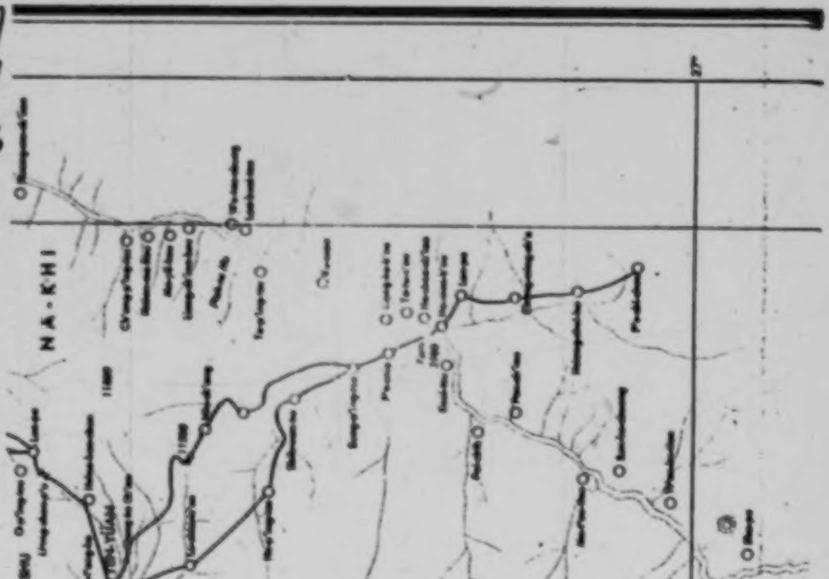
487
491
•133
101
36


PROVINCE
PROVINCE
SSU-CH'UAN
YUN-NAN
NA-KHI

[End map IV E]

2: Rock K-5 (1934-)1947 AF16 Southwest China AF16

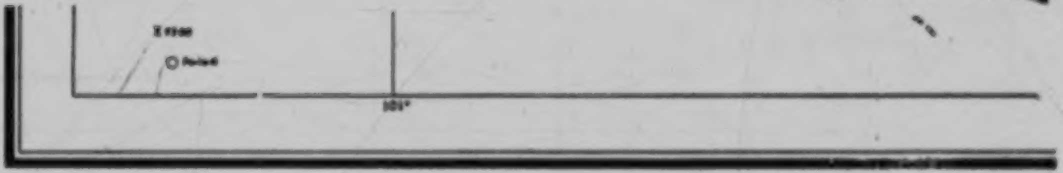
487
491
● 133
101
361


NA-KHI
KU-PAI-SHU
YEN-YUAN
PAI-YEN-CHING
PAI-LIN SHAN
27°

[End map IV F]

487
491
•133 ,
101
361

2: Rock K-5 (1934-)1947 AF16 Southwest China AF16


X Kiao
Huile
101°

AMS L406

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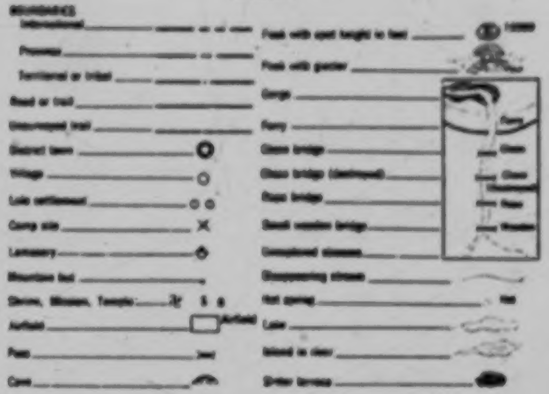
Scale 1:500,000 (Approximate)

3
0
3
6
9
12
15
10
0
10
20
30
40
50

PROJECTION LINES ARE APPROXIMATE

LEGEND

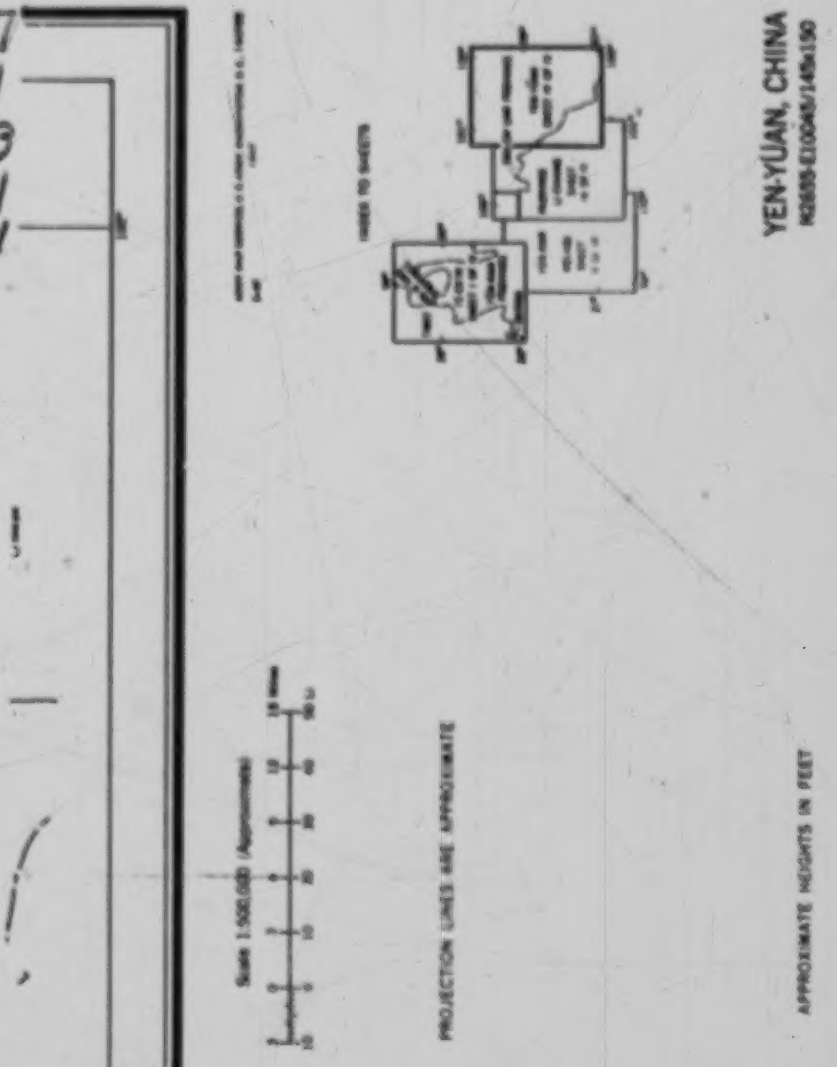

BOUNDARIES
International
Province
Territorial or tribal
Road or trail
Unsurveyed trail
District town
Village
Lolo settlement
Camp site
Lamasery
Mountain hut
Shrine, Mission, Temple
Airfield
Airfield
Pass
Cave
Peak with spot height in feet
Peak with glacier
Gorge
Ferry
Chain bridge
Chain bridge (destroyed)
Rope bridge
Small wooden bridge
Unexplored streams
Disappearing stream
Hot spring
Lake
Island in lake
Sinter terrace

APPROXIMATE HEIGHTS IN FEET

[End map IV G]

2: Rock K-5 (1934-)1947 AF16 Southwest China AF16

487
491
●133
101
361


YEN-YUAN, CHINA
N2655-E10045/145x150
INDEX TO SHEETS
Scale 1:500,000 (Approximate)
PROJECTION LINES ARE APPROXIMATE
APPROXIMATE HEIGHTS IN FEET

[End map IV H]

505 The Taping is navigable for boats from Manwaing to
.133 the capital of Möng Na which lies some thirty miles higher up, and a certain amount of cotton and other goods is carried by water over this short bit of river. Below Manwaing it passes through the Kachin Hills and runs in a gorge full of rapids which entirely preclude the idea of navigation. From Myothit down to its junction with the Irrawaddy, the Taping is again navigable for boats, and even small steamers can reach Myothit when the water is high.

131 At Manwaing the river runs though a large well-cultivated plain full of villages. Its length is quite 30 miles and it averages six miles across. It is divided into two Shan states, Möng Na (Kan-ai) on the left bank of the Taping, and San-ta (Chan-ta) on the right bank. But the actual village of Manwaing, with five other villages around it, is an isolated bit of territory belonging to the sawbwa of Möng Ti (Nan-tien), whose state lies 40 miles higher up, on the Nam Ti, the eastern branch of the Taping.

The origin of this arrangement we learnt from the San-ta sawbwa, who told us that in former times much of the western end of the plain was deserted for fear of incursions from the Burmese, and grants of land were offered by the Chinese Government to any chief who would send some of his subjects to establish themselves there. The offer was taken up by the Möng Ti sawbwa of that period, and his descendants still possess this little piece of land surrounded by San-ta territory.

361 The village contains 100 houses inhabited by Chinamen, is filthily dirty, full of pigs, and smells horribly, a most disagreeable contrast to the clean Shan villages round it.

712 At the eastern end of the place is a large salt depot where we were lodged. At the western end was a mud fort, garrisoned by 200 men of the Trade Protection Levy.

These troops were paid out of the dues exacted from the Chinese traders, and they thus cost the Government nothing. In return for these dues, the safety of the trading caravans was guaranteed while passing through the Kachin Hills which lie between Manwaing and the Burmese border. Anything dacoited on the road was made up to them by the

000 horizon with which I took latitudes every clear night. My maximum and minimum thermometers very soon got out of order and defied all my efforts to get them right again. The survey was done on a scale of four miles to the inch, and I tried as far as possible to get in all the country that came in sight rather than to put in with minute accuracy the part near the road.

•133 Soon after leaving camp we crossed the actual watershed which is presumably the boundary. They say there was formerly a boundary "gate" here called Shên-hu-kuan. From all this part of the road there are magnificent views of the surrounding country. To the south the hills near Sima are plainly visible. To the south-east in a nearer range of hills the gap is seen through which the road from Mêng-tien to San-ta passes, and beyond this gap is visible another range which is probably that which divides Möng Na from Ho-hsa. Far away to the east can be seen a high mountain chain which separates the Shweli from the Salween. To the north this range stretches away till it is hidden by the spurs of Tabu Pum; to the south it culminates in a very high and prominent conical hill called Kao-li-kung which is about 12,000 feet high. South of this the range seems to get lower very rapidly.

[162 241] A steep descent of 1,400 feet brought us into the little Mêng-ka paddy plain which is inhabited by Chinese and Li-sos. The land is all cultivated but is not fertile, and the people do not get much more than a bare living off it. The head-man put me up in his house and I determined to halt here over the 7th, so as to write to the San-si sawbwa to tell him I was coming the next day.

A Shan silversmith from San-ta was a fellow-guest in Yang's house—rather an intelligent man who professed great contempt for the Chinese of Mêng-ka. Certainly the Shans are in many ways a much more civilised race than the Chinese.

579 On the morning of the 7th news came in that a caravan of Chinese traders on their way from Manwaing to Mogaung had been attacked by Kachins at a place called Möng-lawng[1]. Six mules with their loads had been stolen,

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[1] I believe this to be the Shan form of the name marked on the Survey of India map as Ma-lau.

622 looked on with suspicion by the Chinese Government, owing to a rebellion which his elder brother and predecessor started three years before. He is now only allowed to rule over the purely Shan villages of the State, those places in which there are any Chinamen living being administered by the Chinese head-man at Kuan-shang[1].

From the account given to my interpreter by this individual, my arrival on the boundary seems to have caused no small stir both at San-si and at T'êng-yüeh. The news was at once sent on to the T'êng-yüeh official, and the 50 soldiers who form the garrison of San-si were sent up to the Lao-kuan-ch'êng Gate and slept there a night. The excitement was not allayed till my messenger from Mêng-ka arrived with the news that the 200 infantry and 60 cavalry had resolved themselves into 10 baggage mules and seven unarmed men.

162
361
133 The inhabitants of San-si are chiefly Shan, but there is also a considerable Chinese population, amounting perhaps to one sixth or one eighth of the whole. The Taping river runs through the plain from north to south, and it is noticeable that the Shan villages on its right bank are all surrounded by walls, as a protection no doubt against the Kachins who inhabit the hills to the west. The San-si plain is in this latitude the eastern boundary of the Kachin country, the hills to the east of it being peopled by Chinese. The height of the plain is only 3,300 feet.

On the 12th January we crossed the Taping by ferry. The river averages 80 yards in width and at this time of year there are places where waist-deep fords can be found in it. A good deal of hill climbing brought us to the small village of Hsiao-ti-fang where we camped for the night. Here again there was unmelted ice all day, and the night was very cold.

361 This, like many of the frontier villages, was originally a military post placed here by the Chinese authorities to control the border tribes. They have now, however, been settled down as farmers for many generations, though I believe they still receive some small pay or remission of taxes from the Chinese Government. It is probably by

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[1] I heard on a subsequent journey that San-si had been handed over to the Sawbwa of Mong Ti (Nan-tien), but do not know if this is true.

military colonies that this part of Yün-nan was originally 361
peopled by the Chinese. Throughout the T'êng-yüeh and Lung-ling districts the word used for a village is "chai," which really means a fortified post.

In the early morning of the 13th a letter was brought to 000
me containing a telegram from the Deputy Commissioner at Bhamo asking me to wait a little, as the T'êng-yüeh authorities objected to my entering Yün-nan. I had already been in Yün-nan a week without any valid objection being offered to my proceeding, and I guessed that the real reason of the objections of the T'êng-yüeh authorities was the report that had been spread that I was coming in with a large force. I therefore decided to disregard this telegram and go on and see the T'êng-yüeh officials myself.

From Hsiao-ti-fang there is a steep climb to the top of a range at 8,300 feet. The descent on the other side ends with four or five miles of a deep gorge into the Mien-ch'in plain. While riding down this gorge I was met by a Chinese officer with a few men. He seemed suspicious and asked why I was coming by that road. I produced my passport and he became more civil and suggested that we should go on to Mien-ch'in and talk the matter over. He went on ahead, and when I arrived there he sent a civil message to say he would start early the next morning, taking with him a copy of my passport, and would leave four of his men to escort me in. He also added that he would come over himself and see me soon.

I anticipated his visit and went to call on him and found him very civil and even cordial in his manner. His name was Yang and he was staff officer to the general at T'êng-yüeh. He said he had met Margary at Sha-yang and had been friendly with a French priest who formerly lived at Yang-pi. He was apologetic about the way he had stopped me on the road, and said his object was to come on to San-si and prevent me being kept waiting there by the local officials. This was of course a polite fiction. No doubt the T'êng-yüeh authorities thought I was coming in without a passport, and had sent him to turn me back if such should be the case.

On the 14th we crossed a rocky ridge a few hundred 133
feet high through small fields divided by stone walls, and

133

Photo by Captain W. A. Watts-Jones

The T'êng-yüeh waterfall

Plate IX

[Face p. 44]

133 descended into the flourishing little valley of Ho-shun-hsiang. The road turns up this valley and going through a short gorge between two low hills reaches the T'êng-yüeh plain, passing a splendid waterfall 100 feet high, by which the T'êng-yüeh river runs down into the Ho-shun-hsiang valley. Into the pool below this fall hundreds of Panthays are said to have been thrown after the final suppression of the Mahommedan rebellion.

I found an excellent place to pitch my tent near a white temple outside the north-west face of the city, but I very soon found out that pitching a tent near a Chinese town does not answer. Large crowds soon assembled, who though quiet enough after a time became a nuisance, and I always afterwards went to inns in Chinese cities.

712 T'êng-yüeh has been described in considerable detail by Dr Anderson in his *Mandalay to Momien*, and there is now a British Consul there, so it will not be necessary to say much about it. It was, however, the first walled city I came across in China, and as all these walls are built in very much the same way, a description of it will answer, with variations in shape and measurements, for most other towns. It is nearly a square, each side about 1,200 yards long, and not, in the case of T'êng-yüeh, built square to the points of the compass but facing nearly north-west, north-east, etc. The wall is of brick, nearly 30 feet high and two feet thick, and backed up on the inside by an earth parapet 30 feet thick, and some six feet lower than the wall. This parapet, besides supporting the wall and giving solidity to the defences of the city, acts as a banquette for the defenders to stand on. The top part of the wall is deeply crenelated for men or small guns to fire from, and there is a loop-hole in each bit of high wall between the crenelations. Each face has a gate in it which is usually protected by a wall, similar to, but slightly smaller than, the main city wall, enclosing a square space in front of the gate. The entrance from outside leading into this space is placed in one of its side walls, and is not therefore directly opposite the main gate. These defences in front of the gates also flank the walls, and there are usually somewhat similar flanking defences at the corners and at intervals in other parts of the faces. In T'êng-yüeh there is on one side some remains of

491 total length of them must run to some hundreds of thousands of miles. When new they may be fairly good, but they are seldom repaired, and the Chinese proverb well describes them as "Good for ten years, and bad for ten thousand." It is always a great relief to get into some out-of-the-way part of the country where there is only what the Chinese contemptuously describe as an "earth road." These paved roads have their uses however in the rainy season, as the stones prevent the path becoming an impassable morass.

On the 18th January we crossed the Shweli by one of the famous iron-chain suspension bridges. There are a considerable number of these bridges in western China, especially in western and southern Yün-nan. The chains, which are usually ten or twelve in number, are solidly embedded in massive piers of brick or stone on each side of the river, and the roadway is made by planks laid across these. Loaded animals can cross them, and though they sway about a good deal, they will stand a lot of weight.

•133 The river is some 40 yards wide, with a strong current running over a rocky bed. It does not come from any great distance, and in a subsequent journey I was able to fix the position of its source approximately. There is no actual flat plain in this part of its course, but to the west the slope is very gradual to the foot of the steep part of the hills three miles off, and there are numerous Chinese villages both up and down the valley. The river is called by many names. To the Burmese it is known as the Shweli, to the Chinese as the Lung-ch'uan Chiang, or more commonly as simply the Lung Chiang or Dragon River. The Shans call it the Nam Yang in the upper part of its course, but change its name to Nam Mow when it enters the Möng Mow plain.

From the river there is a stiff ascent, at first through the usual dried up grass and fern, and higher up through bamboo and tree jungle. We camped at the little Panthay village of T'ai-p'ing-p'u at 7,400 feet, and had a very hard frost at night.

563 Panthay is the name which we have adopted from the Burmese for the Mahommedans of Yün-nan. The Chinese name for Mahommedans is *hui-tzŭ* or *hui-kui*. The name

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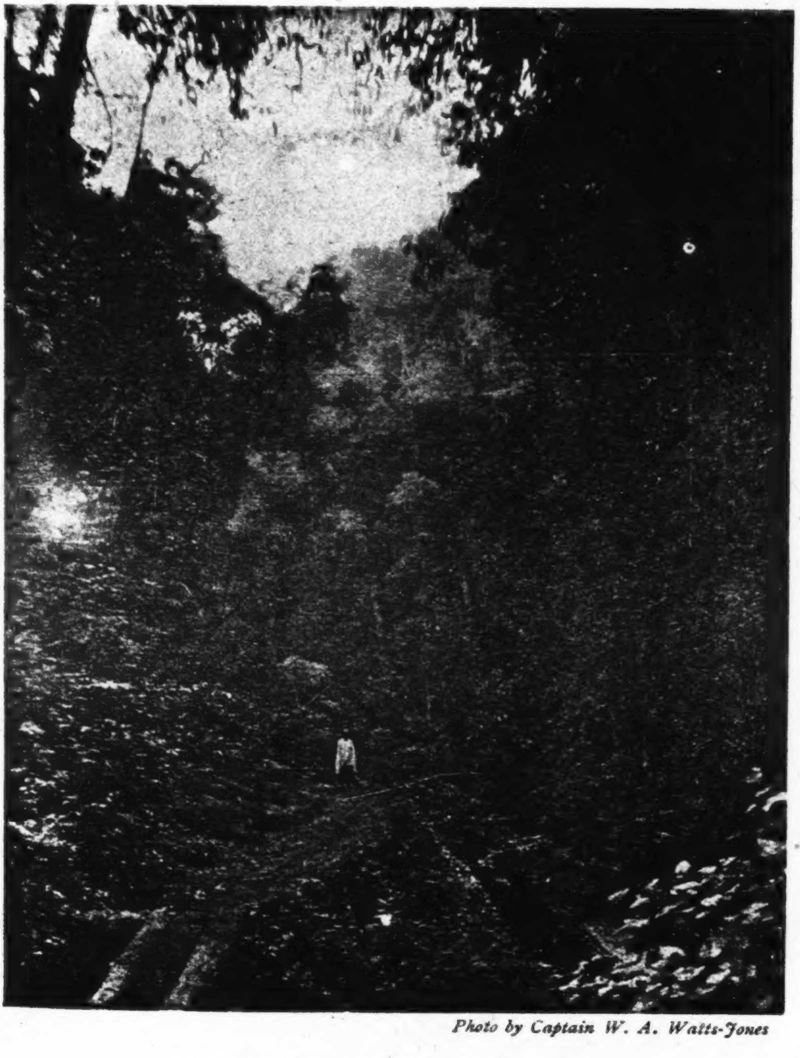

Photo by Captain W. A. Watts-Jones

Coming down to the Salween valley

Plate XII [Face p.54]

563 is a considerable Mahommedan population, and they are found distributed all over the province, more in some districts than in others. Perhaps in Yung-ch'ang, Ta-li, and Yün Chou there is a larger proportion of Panthays than in other towns. Sometimes one finds Mahommedan colonies in very out of the way places, probably men who have taken refuge there after the suppression of the rebellion; and even in the Shan States within British territory there are two or three Panthay settlements.

No doubt the numbers of the Yün-nan Mahommedans were considerably thinned by wholesale massacres when the Chinese troops finally got the best of them, but I do not suppose they ever formed a very large proportion of the inhabitants of the province. At present I should say at a guess they would not amount to more than three per cent. of the total population. Mahommedans are distributed all over China, and I do not think there is any province which has none, but I believe the proportion in Yün-nan is greater than in any other province except Kan-su. It is often supposed that Chinese Mahommedans are more honest and straightforward than the real Chinamen, but from what I have seen of them I very much doubt if this is the case in Yün-nan: their customs and ways of thought are quite Chinese.

● 133 We had not reached the top of the range at T'ai-p'ing-p'u and our road on the 19th still led up till the Shweli-Salween watershed was crossed at a height of 8000 feet. The highest point of the range is a conical peak called Kao-li-kung which lies 10 or 12 miles to the north of the road and is some 12,000 feet high. The pass by which the road crosses is called *Fêng-k'ou, The Wind Pass*, and well merits its name. Here on each side of the road are stone walls which are said to have formerly supported an arch like those of the frontier "gates": this now forms the boundary between the T'êng-yüeh and Yung-ch'ang districts. I climbed up on to a little knoll to the north of the road to take some angles, and got an excellent view of the hills to the north, east and west: Tabu Pum and other prominent peaks near Sadon were clearly visible.

From the top we had a long bit of downhill to the valley of the Salween. The Chinese call this river the

S 133 Lu Chiang, the Shans the Nam Hkong, and our name for it is a corruption of the Burmese name Than-lwen. S 491 It is crossed by another of the iron chain bridges, in this case of two spans, the only two-span bridge of this sort in the province as far as I know. The construction of the pier in the middle is assisted by the fact that the westerly span, which is 50 yards long only, crosses what is in the dry season chiefly shingle with a shallow stream running over it. The eastern span, 80 yards in length, crosses the main part of the river. The bridge has naturally been built at the narrowest place possible, so that 80 yards must not be taken as a fair estimate of the breadth of the Salween in this part of its course. Above and below the bridge its width varies from 100 to 160 yards. It has a fairly strong current and must be very deep in the middle.

At the time the bridge was under repair, and we had to cross by ferry two miles lower down. They were removing the stones of the pier to look at each chain and see whether it wanted replacing. The repair of the bridge is not undertaken by the Chinese Government, S 501 but is paid for by a subscription got up by the merchants of T'êng-yüeh. It was noticeable that the ferry was worked by five bamboo S 133 rafts specially constructed for the purpose: there is not a single boat in the plain. The Salween, like so many other Yünnanese rivers, is useless for navigation. There are quiet stretches where it would be quite possible, but the frequent occurrence of rapids would prevent boats from going more than a few miles.

We crossed the river and camped on the opposite bank at a height which my boiling-point thermometer made 2,200 feet, by far the lowest elevation anywhere in this S P 137 101 part of Yün-nan. The climate was consequently at this time of year very pleasant, not hot in the daytime, and not too cold at night. The vegetation was entirely different from that of the country we had been passing through. S 131 Banyans, plantains, and other trees and shrubs peculiar to the warmer climates of Burma and the Shan States are to be found everywhere. The valley is in fact inhabited by Shans who call the plain Mong Hkö and are ruled by a sawbwa who lives a few miles below the bridge. This is practically the limit of the Shan race in this direc-

CHAPTER IX

YUNG-CH'ANG FU TO TA-LI FU.

Leave Yung-ch'ang—Chinese ignorance of topography—The Mekong—The Chinese New Year—Ch'ü-tung and Yung-p'ing—Four hilly marches—Lo-los—Yang-pi—The Ts'ang Shan—Hsia-kuan—Ta-li Fu—The Ming-chia—Industries—Missionaries—A New Year's festival.

On the 24th January we left Yung-ch'ang. The road 000 goes up and across the plain and ascends the usual bare hills from its north-east corner, finally following the bed of a stream up a narrow gorge to the top of the range at 7,800 feet. From here there is a slight descent to the little village of Ta-li-shao, where I pitched my tent, and my followers found shelter in a temple. Ta-li-shao is not to be recommended as a halting place. There is no inn, and the hillside is so steep that it is not easy to find room to pitch a tent. Shui-chai which is a good-sized village is only two miles further on, and would have been a better place to sleep at.

The stream which runs down the Yung-ch'ang plain is 133 shown on some maps as falling into the Mekong, but 823 Chinese maps give it as a tributary of the Salween, and this I ascertained on a subsequent journey to be correct. Towards the south end of the plain the river does make an easterly bend, and this has probably led some former traveller to suppose it ran into the Mekong. The Chinamen as usual were very vague about it. One of those that I asked said it ran into the Mekong, but that I was perfectly correct in saying that it joined the Salween eventually, as the former river was a tributary of the latter! This is a good specimen of the geographical knowledge of the Chinese. It is curious that, while Burmans, Shans, Kachins and other tribes are such excellent hands at topography,

●133 and can draw a good map with a stick on the ground, the
823 Chinese should be so lacking in this faculty, and will give
one all sorts of geographical information which is obviously
incorrect.

Our road on the 25th led gradually down hill as far as Shui-chai. From here the descent is down a narrow gorge with precipitous crags rising on each side. The path is zigzagged or it would be impossible for animals. Finally a bit of more gradual down-hill along the hillside brings one to the Mekong which is crossed by another of the iron-chain suspension bridges, the chains on the right bank being fastened round short pillars of natural rock cut out of the hillside.

133 The river averages from 80 to 100 yards in width, flowing
with a strong current which renders it quite unnavigable.
It runs between wall-like hills which rise almost sheer for
1,500 or 2000 feet and then slope more gradually back to
the tops of the ranges. There is absolutely no level ground
in the valley. This is characteristic of this river during its
course through Yün-nan. I have subsequently seen it in
several places and have found it much the same every-
where. The elevation at the bridge I made 3,900 feet,
1,700 feet higher than that of the Salween. After crossing,
a very stiff ascent brought us to the long narrow village of
527 Sha-yang. It was the Chinese New Year's Eve, and every
house had a young fir tree stuck up in front of the door.
This is, I believe, the universal custom in Yün-nan, but it
does not seem to obtain in eastern China.

New Year's Day is the great holiday of the Chinese year. It occurs during the months of January or February, but not on any fixed date in our calendar, for the length of the Chinese year does not correspond with ours. They have twelve months, six of them of thirty days and six of twenty-nine days, making 354 days in all. So to make it come right with the sun they have to reckon one of the months twice over every three years. The same system of an intercalary month is used in Burma, but the Burmese calendar does not correspond in other respects with that of the Chinese.

On New Year's Day all shops are shut and no business of any sort is done. The people all put on their best clothes, often hired from a pawnshop for the occasion, and

764 there are enormous tracts of country taken up by graves. In Yün-nan they are usually along the foot of the hills in ground which lies too high to be irrigated and cultivated.

On arriving at the town I went to the house of Mr Smith
797 of the China Inland Mission, who very kindly put me up. The European population of Tali consisted of Mr and Mrs Smith and their children, two missionary ladies who lived with them, and M. Leguilcher, a French priest who had been some 40 years in the province.

361 Ta-li is built at a height of 6,900 feet near the foot of
the hills which rise up to about 14,000 feet on the west, while
a mile away to the east is the Ta-li lake, the official name
● [133] of which is Erh Hai. This lake is a fine piece of water
30 miles long and from three to seven miles wide, bounded
on the east by low, bare, reddish coloured hills. It is
[505] full of fish and is navigated a good deal by small sailing
boats, carrying passengers and cargo from one part of the plain to another. The origin of the name Tali I imagine to be the Shan words *ta li* meaning *good ferry*. This is only a guess on my part, but as Shans almost certainly once inhabited this plain and as there is still a ferry across the lake near the town this derivation seems probable.

The town is surrounded by the usual wall, which in this case is built of stone, and the population of the place is perhaps 30,000. The people in the town are Chinese with a good many Panthays among them, but the majority of the inhabitants of the villages belong to an aboriginal tribe who call themselves Pê-tsö, but whom the Chinese know as Ming-chia. These people retain their own language, and many of them can barely speak Chinese. Their women do not as a rule bind their feet, but in most respects they now conform to Chinese customs. They seem a quiet, peaceable, hardworking people, and in the winter some of them find their way as far as Burma in search of work.

316 One of the chief industries of Ta-li is the quarrying of marble in the Ts'ang Shan range. The stone is white mixed with black and various shades of grey, brown, green, yellow, and red. It is polished and worked up into representations of scenery which they say are natural, though I have heard this doubted, and it is possible that they sometimes use some stain to help the natural colours.

000 used to hearing objections of this sort raised, and it did not make me change my mind.

On the 5th February we left Ta-li and went back to Hsia-kuan, and on the 6th started for Shun-ning. The road leads up a big range, reaching the top at 8,700 feet. They say there is usually snow on this pass at this time of year, but the winter happened to be an exceptionally mild one. From here a long winding descent brought us into the northern end of the Mêng-hua plain at the village of Hsün-chien, where there is a particularly good inn.

• 133 The plain is some 25 miles long and three or four miles wide, with a small stream, which is the source of the Red River, running southwards down the middle of it. Its height [162] is about 6000 feet. The inhabitants are Chinese and Panthays, the latter being in considerable numbers but not in a majority. The town lies at the southern end of the plain, and I did not see it at this time, but passed through it in a subsequent journey in 1898[1].

175 Mêng-hua is celebrated in the ancient history of Yün-nan as the scene of a deliberately planned murder, by which the Nan-chao kingdom was founded. At that time central Yün-nan was divided into six little states, but Pi-lo-ko, the prince of Mêng-hua, being a man of enterprising mind, invited his five royal neighbours to a feast. He had previously constructed a specially inflammable house of pine wood, and having made his guests dead drunk, set fire to the building and burnt them all. He thus combined the six kingdoms under his own rule and soon afterwards moved his capital to the Ta-li plain. This was in A.D. 731, and the kingdom continued with various changes of dynasty till it was subdued by the Mongols in the thirteenth century.

000 The next morning the *ch'ai*[2] sent with me as escort divulged the fact that he was not after all to accompany me to Shun-ning, but was to go to Mêng-hua. It appears that the *Hsièn*[3] of Ta-li, after agreeing to send him with me to Shun-ning, had been subsequently struck by the great responsibility he was taking on himself in doing so, and had consulted on the matter with the *Fu*[4]. The result

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[1] See p. 147.

[2] Policeman.

[3] Magistrate.

[4] The Fu district official, sometimes called the *prefect* by Europeans in China.

000 downhill passing a most remarkable temple, called Ch'a-fang-ssŭ, built on a ledge in a precipitous rock which rises sheer some 300 feet.

During this descent the Yang-pi River is seen on the left hand running most unexpectedly in a north-easterly direction. It makes a very sharp bend in this part of its course and afterwards again comes round into its original southerly direction. The Yang-pi is at the ferry 130 yards wide, with a moderate current, but a little lower down it gets squeezed in between the hills again, and becomes narrower, deeper, and more rapid. It is crossed by a rather shaky bamboo raft, and a few hundred yards of steep ascent brings one to Hsin-niu-kai, where there is a dilapidated official rest-house.

● 133 The people of this village are Chinese, not Lo-los, and from here on to Shun-ning the inhabitants are principally Chinamen. The height of the Yang-pi here is 3,900 feet, a fall of more than 1,200 feet from where we had last crossed
[132] it on the Yung-ch'ang-Ta-li road. The climate at this low elevation is much warmer than most places in this part of the country and the opium crop was nearly ripe, whereas at Ta-li and other higher lying plains it was only just showing above the ground.

823 The river in this part of its course is not known to the Chinese as the Yang-pi Ho. The people here seem to have no name for it but call it vaguely the Ta Ho or Big River. In fact the Chinese very seldom give names to their rivers, but call them after the nearest town or important village through which they pass. Nearly all rivers thus have different names in different parts of their course. This according to our ideas of geography is extremely inconvenient, so I have thought it best to adhere to the name of Yang-pi River.

136 I had had scarcely any shooting so far, but on this march I first had an unsuccessful stalk after two barking deer, and afterwards shot a hen pheasant (*Phasianus elegans*), one of nine or ten that got up.

000 On the 11th we had an uphill road, climbing the Ta-chin Shan, a hill with a conspicuous pagoda on its summit. We left this pagoda on our left hand and followed a narrow path cut out of an almost precipitous hill-side to the village

Plate XVIII

[Face p.78]

Photo by Captain W. A. Watts-Jones

The Wan-nien-chuang valley

5. Davies G-5 (1894-1900) 1909 AF16 Southwest China AF16

000 shed at 5,600 feet, one of the lowest points in this part of the range. From here we went by an equally gradual descent
S to T'ou-tao-shui, a little village in which a market is held
733 every five days. The small official in charge of the police here came to see me in the evening somewhat the worse for liquor, and I saw three or four other men in the same state, rather an unusual sight in China. Most Chinamen drink rice spirit, but they seem to know when they have had enough, and one seldom sees a drunken man.

From T'ou-tao-shui there are two roads on to Kun-long. The most direct route passes through Mêng-lai, but I took a longer and better road round by Mien-ning. The next day we had an easy march to Yi-wan-shui, and on the 20th we slept at La-tien-p'o, a village which lies on the Mêng-lai Ho, the main source of the Nam Ting. Still following
S up this stream we reached Mien-ning T'ing on the 22nd.

● 133 Since leaving Shun-ning the country and climate had been gradually changing, and we were now in a district more resembling the Shan States than the higher part of
S China we had hitherto been travelling in. The elevations
137 of the hills are much lower, the climate considerably warmer, and the whole country is covered with jungle of a semi-tropical kind instead of the bare hills and pine forests of the districts further north.

S 361 The Mien-ning plain is some seven miles long by three miles wide. The town is built near the southern end of it on the left bank of the Mêng-lai Ho, a stream 30 yards wide and three or four feet deep, which runs down the middle of the plain from south to north. There is a great deal of vacant space inside the walls, and the town contains only 200 houses, but it is surrounded on all sides by suburbs amounting to another 300 or 400. The largest suburb is on the east, and this appears to be the chief commercial quarter, such as it is. The inns are miserable, and I found quarters in a good-sized temple, built by the Ssŭ-ch'uan
P residents of the place.

177 Mien-ning is always pronounced Mien-ling by the inhabitants. It was originally a Shan state, and its proper Shan name is Möng Myen. There are still a great many of this race living here, but the Chinese are now in the majority, and the Shans are taking very much to Chinese

5. Davies G-5 (1894-1900) 1909 AF16 Southwest China AF16

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Plate XIX

[Face p. 80]

Photo by Captain W. A. Watts-Jones

The Mêng-sa plateau

Pai-i AE7

000 and after passing the Chinese village of Ch'ing-mên-k'ou
suddenly emerges through a gap in the hills into the
plateau of Mêng-sa[1], which is 10 miles long by two or three
miles wide, very bare and dry with little water in it. There
S are few irrigated fields, and consequently not many villages.
133 The small stream which waters the plateau comes in from
the east close to the town, makes a bend round for two or
three miles, and then runs straight into a range of hills,
re-appearing again on the other side.

The disappearance of rivers into ranges of mountains is
not at all an uncommon thing in Yün-nan and in the Shan
States. I have seen four or five instances of it myself.
One of the most remarkable occurs in the Taw-nio plateau
near Kun-long ferry. Here all the streams run straight
into a range of limestone hills, and come out the other side,
S crossing the Mêng-ting-Kunlong road, and falling into the
P Nam Ting.

[361] Mêng-sa is surrounded by a mud wall and contains
622 150 houses inhabited by Shans. Just before entering the
town a dirty Chinese suburb of 50 houses is passed through.
The younger brother of the Kêng-ma sawbwa lives here
and governs the district. The sawbwa's son was also there
at the time of my visit. He had been to Möng Cheng
(Chên-k'ang) to be married, and was now on his way home
with his bride, accompanied by a large train of followers on
horseback.

The sawbwa had very civilly sent a man to meet me
and to go with me as long as I was in his territory. He
asked me to go round by the town of Kêng-ma, but I
wanted to see the direct road to Kun-long and could not
spare the time to make this detour. I was able to pay him
S a visit later on.

133 Looking back northward from the Mêng-sa plateau
some fine snow-covered peaks were visible at no great
distance off, in the range running down the right bank of
the Nam Ting. This range is far the highest in this part
of the country, and on a subsequent journey I calculated its
height as nearly 11,500 feet.

000 Leaving Mêng-sa the next morning we climbed a big

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[1] Möng-Hsa in Shan. Not to be confused with another Möng Hsa, a name often given to the two states of Ho-hsa and La-hsa (see p. 26).

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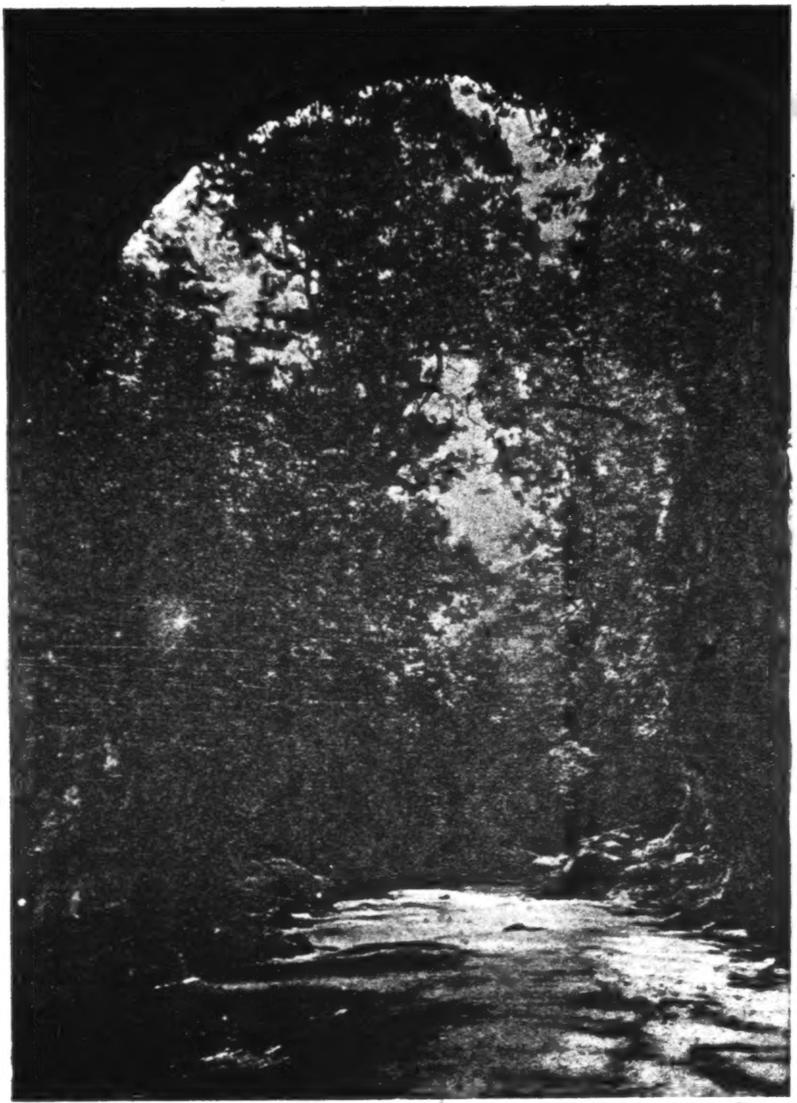

Photo by Captain W. A. Watts-Jones

River running into a hill in the Mêng-sa plateau

Plate XX [Face p.82]

The La-hu chief also still lives here and has a certain 622
amount of authority. He is a quiet, simple-minded old
gentleman, quite a jungle man. He told me that the Shans
formerly inhabited this place, but four or five generations 563
ago the La-hus came down from the neighbourhood of Mien-ning and drove them out. The Shans retired to Möng Lem, but there are still a few families of Shan descent living in the villages round.

The inhabitants of Ch'üan-lo and the neighbourhood seem now to be chiefly La-hus who have taken to Chinese customs, and who, many of them, now call themselves Chinamen. There are also a few real Chinese living in the town, but the total absence of curiosity among the people here soon made one realise that one was not among a Chinese population. Hardly a soul came to stare at me all day.

On the 27th of March we crossed a range of hills at a little over 6000 feet, and descended very steeply to the Mekong at the village of Nan-pei. The ferry village of this name where I camped is inhabited by La-hus, but the people of the main village of Nan-pei, which is 1½ miles short of the ferry, are P'u-mans, a tribe which is very much split up into small communities. They were apparently of the same family as the Las, Was, and Palaungs, but have become so scattered and isolated from each other that I have found some villages of them who have forgotten their own tongue and now talk the Wa, the Shan, or even the Chinese language.

The Mekong is here at an altitude of 2,300 feet, and 133
runs, as usual with this river, between very steep hills with practically no level ground outside the river bed. I had great difficulty in finding room to pitch one small tent.

The next day we crossed the river in a large boat much resembling an English punt. At this time of year animals can be swum across, but in the rains the current is very strong, and this big boat is used to convey mules as well as men. The average width of this part of the Mekong is some 80 yards. Even in the dry season there is a fairly strong stream and the water is thick and muddy.

This ferry seems to be a good deal used. Quite a 000
hundred mules crossed it while I was there, all carrying

language. The fact seems to be that the P'u-mans have 563
become so split up into small and isolated communities, that many of them have lost their own language. It was not till a subsequent journey in 1899 that I came across P'u-mans who had a language of their own[1].

On the 23rd April we arrived at Kêng-ma. The town 133
is built in a plateau, a most unusual formation for this part of Yün-nan, where one generally finds nothing but a series of ranges of mountains and comparatively narrow valleys. The plateau measures about 15 miles from north to south and half this distance across. To the east, separated from it by low hills, is the Nam Hpyit[2], while two other streams run across the plateau in a generally easterly direction and find their way through gaps in these hills into that river. It is along these two streams and their small tributaries [361]
that the greater number of the villages are situated, as they are here able to cultivate narrow strips of paddy. Most of the plateau consists of open grass land, lying too high to be irrigated and not much cultivated.

The town is pleasantly placed on rising ground, and 361
contains about 300 houses, built of mud or soft bricks. The climate is excellent, and I found it quite cool at this, the hottest time of the year, though the height is only 3,850 feet. The place seems prosperous, and there were a good many Chinese traders there, among whom I found the Panthay merchant whom I had seen in Yung-ch'ang[3]. He told me that since we last met he had spoken about the proposed railway extension to Kun-long to other traders, who all agreed that it would be an excellent thing for the trade of this part of China.

The sawbwa's son came to see me soon after my 622
arrival. Having reached the age of 25, he had now taken over the government of the state, his father retiring in his favour. This is an almost universal custom among Chinese Shans. The father, however, still remains the nominal head of the state, and the son is not recognised by the Chinese Government until the father dies. Kêng-ma is one of the largest and best governed Shan States in the province of Yün-nan.

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[1] See p. 146.

[2] Nan-p'i Ho in Chinese.

[3] See p. 59.

669 gave orders that the sawbwas of Chên-k'ang, Kêng-ma, and Mêng-ting, were to collect men and combine against the rebels. They seem to have been successful in dispersing them for the time, though I could not hear of much loss of life on either side. This is the story as given me, but, though there is nothing improbable in it, I will not be answerable for its correctness. A Chinaman always has a story to account for any circumstance he may be asked about, with an equally ready answer to any further questions that may be put to him.

●133 The next day we continued our journey, crossing a range at 6,800 feet. On the top there are several basins, two of them of considerable size, with villages in them, the water of which has no outlet, the streams running into holes in the hills. In one of these, in which the village of T'ien-pa-chai is situated, the hole is not big enough to take all the water which comes down when the stream is swollen, so that in the rains a small lake is formed where it enters the hill.

On the 2nd May we had a steep bit of down-hill to the Salween, which is here 2,050 feet above sea level. We crossed it at Han-kuai ferry, which is just below the corner where the river begins to make its westerly bend. The Salween is here 120 yards wide with a strong current, and is crossed by one good-sized ferry-boat. The boatmen live at Han-kuai village, which is on the right bank, nearly 2000 feet above the river, up a very steep hill—an inconvenient arrangement for travellers arriving from the east, as they have to wait till the ferrymen choose to come. The usual custom is to fire a gun to attract their attention.

The next day a very hilly march, passing Möng Nawng[1], a small Shan plain with a swampy lake in it, brought us to Pin-ka, a plain five miles long, inhabited by Chinamen and under the jurisdiction of Lung-ling. Two more days of hilly marching in wet weather took us to Hsiang-ta, another little Chinese plain containing about 15 small villages, and on the 6th of May we descended to Möng Hkwan, an important Shan state, called Mang-shih by the Chinese.

The plain is watered by the Nam Hkwan, a tributary

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[1] Mêng-nung in Chinese.

of the Shweli, and is some 12 miles long by eight miles 133
broad. It is full of villages and well cultivated, and is one [241]
of the largest, and quite the richest, of the plains inhabited
by Chinese Shans. The town, like all the other villages of 361
the plain, is so surrounded with bamboos and with banyan
and other trees that it cannot be seen till one is close up to
it. It contains 500 or 600 houses, well built of soft bricks [342]
in the Chinese style, and most of them have tiled roofs.
The sawbwa's new palace is a very fine building, occupying [346]
a considerable part of the middle of the town. There is
also a large monastery, and the whole place wears a greater
air of prosperity than any Shan town I have ever seen.
There has been a mud wall round it, but this is now all
broken down. One of the sights of the place was a panther, [136]
which the sawbwa kept shut up in a cage just outside his
palace. It was said to have been caught on the hills which
overlook the plain. I have occasionally seen panther's
tracks in Yün-nan, and no doubt they exist in many places
in the province.

I was put up in the old palace, which was occupied by the 622
sawbwa's uncle, who then had more to do with the management of the state than the sawbwa himself. He was a very pleasant-mannered and intelligent man, apparently about 50 years of age. He had travelled all over the Chinese Shan States, and had visited Ta-li Fu and Yün-nan Fu. I sent my card to the sawbwa, and he returned the call in person. He was considered too young to govern the state, and his uncle was at that time officially recognised as regent by the Chinese authorities[1]. The sawbwa had just been to Rangoon to worship at the big pagoda, and seemed much pleased with his visit.

The height of Möng Hkwan is about 3,350 feet, and it 133
is considered too unhealthy for Chinamen to live in except
in the cold weather. A good many Chinese traders come 753
here in the winter, but they all go away in March or April. The guide who brought us down from Hsiang-ta went back home at once; nothing would induce him to sleep the night in the plain. However we were for several days in these comparatively low-lying Shan States, but none of my China-

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[1] The young sawbwa assumed the government of the state himself soon after my visit.

000 Man-waing[1]. The trade along this route is fairly large in the cold season, and we passed some 500 mules, loaded chiefly with walnuts, chestnuts, pears, dried figs, and a little silk and tobacco.

From Man-waing on to T'êng-yüeh is a well-known road, previously traversed by several travellers, and described in detail by Dr Anderson in his *Mandalay to Momien*, though the learned doctor gets rather mixed in his names of places.

Ryder and Watts-Jones took the main road which crosses the Taping by one of the numerous ferries over this part of its course, and goes up that river's left bank. I took a somewhat longer route round by Chan-ta[2] where I was hospitably entertained by the sawbwa, and rejoined the rest of the party at Chiu-ch'êng (Old city), the former capital of the Kan-ai[3] state. The present town is off the main road in between the two branches of the Taping just above where they join. Here lives the long-bearded sawbwa with whom we had been so friendly on our expedition to find the boundary "gates," and I was sorry I could not spare the time to go and see him.

133 Our route so far, after leaving Man-waing, had lain
[361] through a plain several miles wide, well cultivated with rice
fields, and full of prosperous Shan villages, the part on the
right bank of the Taping being Chan-ta territory, and that
on the left bank Kan-ai. The capital of the latter state is
near the head of the plain, and above this, steep bare hills
close in on the Nam Ti, the Shan name for the eastern
Taping, the valley of which the road follows up.

In fifteen miles or so the valley again opens out into
the comparatively narrow plain of Möng Ti, or Nan-tien
[563] as the Chinese call it. This is also a Shan state, but the
climate being cool enough for Yün-nan Chinamen to live
in, they are gradually settling there, and the population is
[631] now nearly as much Chinese as Shan. The sawbwa rules
a large extent of territory including Möng Yang and Möng
Hüm, and I believe he is also in charge of Chan-hsi, though
of this I am not quite certain.

000 In this plain we passed an encampment of wandering

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[1] See p. 30.

[2] San-ta in Shan.

[3] Möng Na in Shan.

186 generals and admirals looking about for an excuse for their defeat, described our men-of-war as "sea devils," against whom it was impossible for mortal men to contend.

I slept at Shun-chiang, a village of 200 houses, 631 which is perhaps the principal place in Hsi-lien. This district consists of a plain or plateau about 23 miles long running from north to south at an elevation which averages 6000 feet. The northern half runs down the 133 Ku-tung Ho, and is from one to three miles wide. This river then turns off eastward to join the Shweli, and the southern part of Hsi-lien is a plateau with little tributaries of the Ku-tung Ho or of the Shweli, crossing it from [241] west to east. Along these little streams are irrigated fields, so that in going up the plateau from south to north one crosses alternately small rice plains and bits of higher-lying uncultivated ground, covered with rocks and bushes.

The hills all round are fairly well clothed with forest, chiefly of fir trees. The range to the west rises to 9,500 feet, but that to the east is lower, with gaps through it by which the streams reach the Shweli[1]. The abundance of [342] timber is shown by the fact that all the houses are built of [313] wood instead of the usual soft brick. The district is decidedly a prosperous one and contributes to the volume of trade to be got out of T'êng-yüeh. Fruit-growing and sheep-rearing could be carried on very successfully here.

From Shun-chiang we went on by two easy marches to Ma-li-pa, a village in the small district of T'ien-t'ang-kuan which lies at the head of the Ku-tung Ho. Here we found shelter for mules as well as men in a water-tight but very [622] draughty temple. The district is governed by an hereditary Chinese chief, and is of no importance except for its iron 316 mine. This has been worked chiefly by surface-diggings, but in two places there are deeper shafts, the earth being propped up by logs of wood placed close together and supported by posts. One of these goes down forty or fifty feet.

327 The ore is smelted near the village, and the bellows of the furnace, as at Wan-yao, are worked by a water-wheel. [376] The softer iron is used for the manufacture of pans, but

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[1] Some of these streams run into holes in this range.

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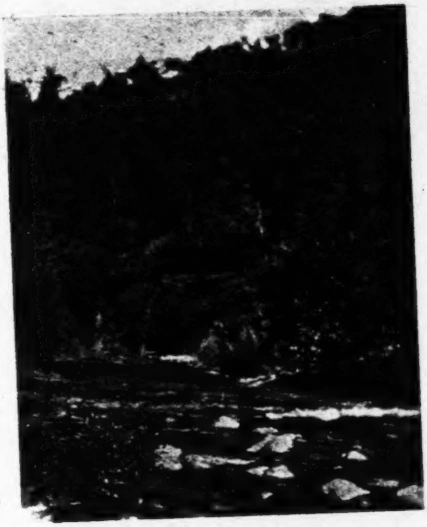

The Ya-lang Ho

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Photos by Major H. R. Davies

Bridge over the Nan-ch'iao Ho

Plate XXXI [Face p.140]

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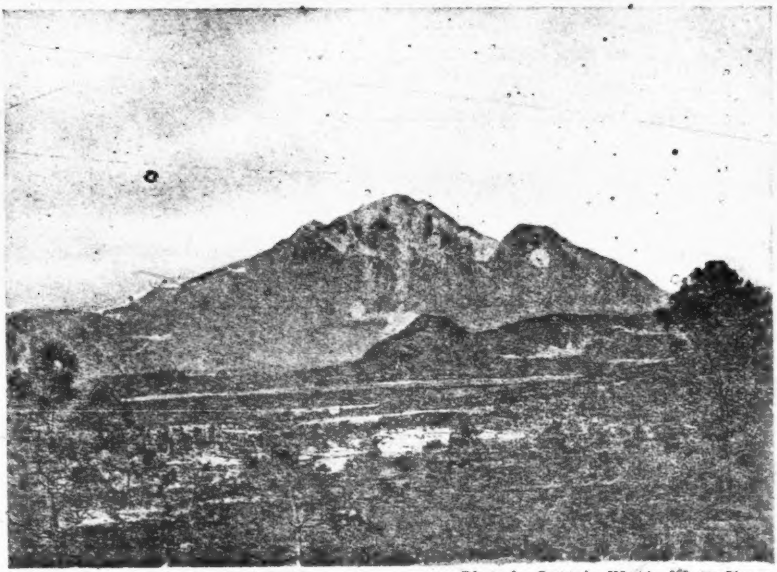

Photo by Captain W. A. Watts-Jones

The Li-chiang Fu peak, 18,000 ft.

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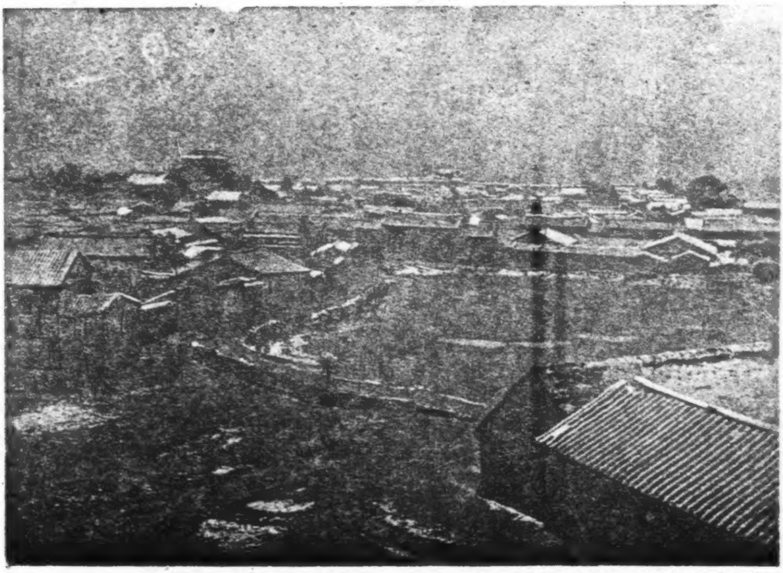

Photo by Major H. R. Davies

Yün-nan Fu

Plate XXXVI

[Face p. 154]

000 it on our right, passed through the village of T'ang-ch'ih, in the middle of which is a hot sulphur spring and a bathing-tank, much frequented by the rheumatic. After this we crossed another range, and descended steeply to the Yi-liang plain, which lies at 5,300 feet, an exceptionally low level for this part of Yün-nan.

361 The town contains about 800 houses and is surrounded
by the usual wall, but most of the inns and shops are in
[436] a suburb outside the north gate. Their cotton and foreign
goods reach them through Tong-king, and the only important local product is opium, which grows well here. The place is usually called Ni-liang by the Yün-nanese, and locally it is also known as Mi-liang.

The next day at the far edge of the plain we forded a river 70 yards wide, which runs down from Ch'ü-ching Fu, and then ascended on to a large plateau over which our route lay for the rest of the way to Lu-liang Chou.

●133 This plateau ends to the north in a precipitous descent to the Ch'ü-ching River[1], while to the south the haze prevented me from seeing how far it extended. The general elevation averages well over 6000 feet, and it undulates so gently that carts are used all over it. There are a few fir trees in places, but the general character of the country is very bare and dry, with little rocky mounds rising out of it. Great pillars of sandstone rock 15 or 20 feet high standing in groups form a curious feature of the landscape,
and might easily be taken for ruined buildings when seen
[241] in the distance through the haze. The crops in this plateau
are very poor and scanty: opium seems to grow better than anything else.

000 After two days and a half over this somewhat monotonous country, we again reached the Ch'ü-ching River. Crossing it by a fine thirteen-arch stone bridge, 120 yards long, we soon entered Lu-liang, which lies a little higher up on the right bank. The river here has a slow current and a depth of apparently three or four feet, but lower down between here and Yi-liang it seems to run in a deep gorge, and I could hear of no road up its banks in this part of its

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[1] I do not think that the Chinese call the river by this name in this part of its course, but as it runs down from Ch'ü-ching Fu, I have thought best to so name it.

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Pla[illegible]XXXIX

[Face p. 166]

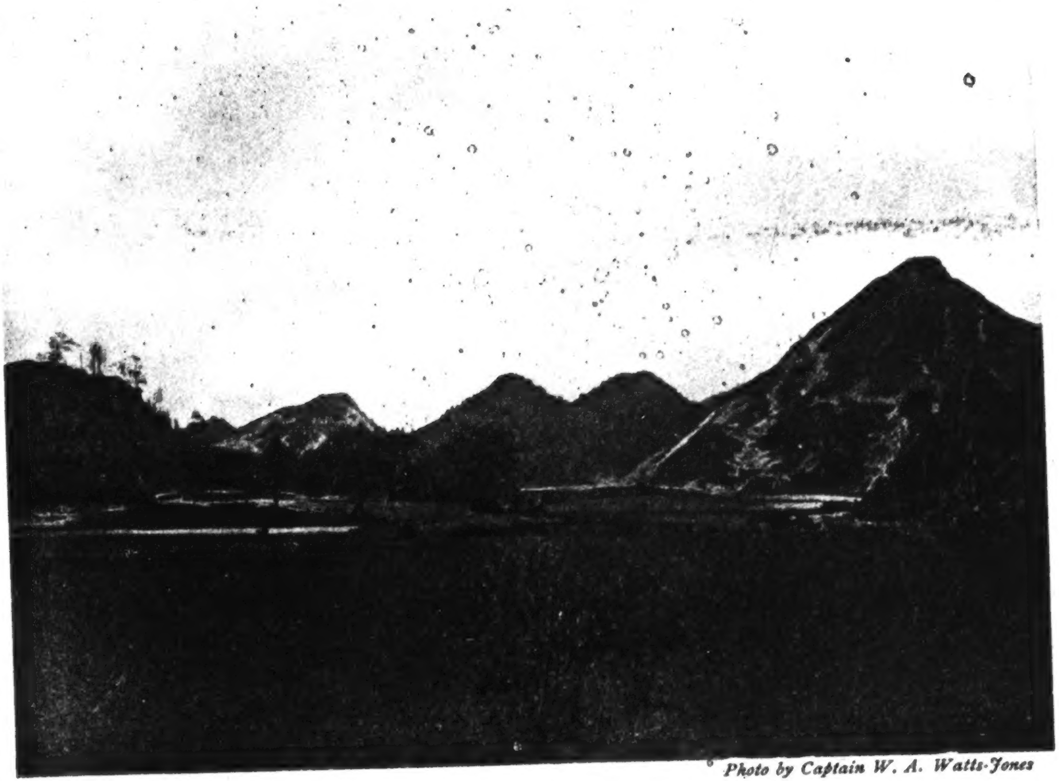

Photo by Captain W. A. Watts-Jones

On the Wei-ning plateau

5: Davies G-5 (1894-1900) 1909 AF16 Southwest China AF16

CHAPTER XXII

FROM WEI-NING CHOU BACK TO YÜN-NAN FU *VIÂ* TUNG-CH'UAN FU.

Part from Watts-Jones—Watershed of the Yangtze and the Canton River—A mass of steep hills—White wax insect—The Niu-lan Chiang—Zinc smelting—Kung shan—Lead, silver, and zinc mines—Tung-ch'uan Fu—Weaving—Copper mines—The Yi-li Ho—A high plateau—Wooded country—Curious rice husking machine—Cuckoos—Hsün-tien Chou—Sung-ming Chou—Lose the way—Reach camp at dark—A country full of pheasants—Reach Yün-nan Fu—Meet Ker—Results of his explorations—Ryder's movements—Arrival of Turner.

WATTS-JONES and I left Wei-ning on the 27th April. 000 Our roads were the same for the first five miles, leading along the northern bank of the Wei-ning Lake, till we crossed its outlet by a bridge at Ta-ch'iao. Here we separated. My road led over undulating ground among clumps of fir trees to the little village of Shuang-lung-ch'iao where I pitched my tent.

On the 28th 18½ miles of hilly marching, over a country sparsely inhabited by Lo-los, brought us to Ch'ing-mo-ti. The next day we crossed a range at 8,150 feet and descended by a path, the last part of which was almost precipitous, to the small village of Ch'ia-hsi-ho.

The ridge crossed on this march is a spur running out from the main range which lies a few miles to the south and forms the watershed of the Yangtze and the Canton River. I do not think I have ever seen such a mass of steep broken hills as this country presents. The hill-sides are 133 very barren and dry, and many of them are too steep to be 241 climbed, so that the roads have to follow the beds of streams. Maize is the chief thing grown by the few villages that there are.

This was the first district in which I came across the 231 white wax insect: most of the villages about here rear

● 133

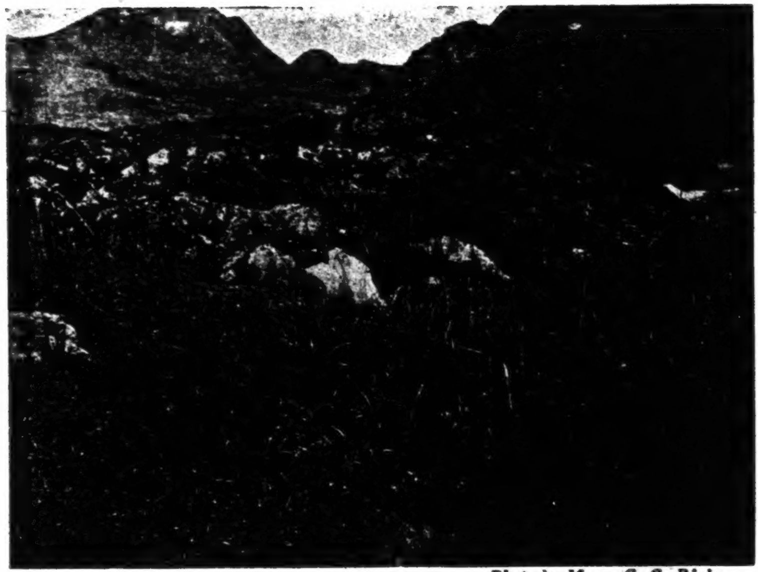

Photo by Major G. C. Rigby

Country between Mêng-tzŭ and Man-hao

Plate XLI [Face p. 178]

439 chester product and is rapidly supplanting the latter in western China.

The height of Mêng-tzŭ I made about 4,700 feet, and the climate is pleasantly cool. The inhabitants of the surrounding country belong principally to the P'u-la and other tribes, speaking dialects of the Lo-lo type.

●133 After spending two very pleasant days here, I started for the Red River, taking three days to do the 30 miles which separate Mêng-tzŭ from Man-hao. The country passed through is curious, consisting chiefly of a mass of small basins with no outlet for the water. These "devil's punch-bowls" are characteristic of a great part of the eastern and south-eastern parts of Yün-nan.

485 Another curious and unpleasant feature of the road from Mêng-tzŭ to Man-hao is the entire absence of any sort of inn accommodation for men. There are large stables for mules at the recognised halting places, but no provision is apparently considered necessary for human beings who are so ill advised as to take a road which leads into countries outside the borders of the Middle Kingdom.

000 As it rained on and off, I had to sleep beside my mules on the first night, and on the second to squeeze into an extremely small temple already occupied by a tax collector and his clerk. The country passed through is very poor and thinly populated. The village of Yao-t'ou, where I slept my second night, is considered too unhealthy to live in by the Yün-nanese, and is inhabited by Cantonese who have found their way there through Tong-king. Its height is over 4000 feet, but it is placed in a narrow valley much shut in by hills, which perhaps accounts for its bad reputation. The name Yao-t'ou means "shake head," and is said to have been given to it because everyone who sees it shakes his head in disapproval.

From here, after a little up hill, a very steep descent in pouring rain brought us down to the Red River at Man-hao at a height of 600 feet. The village contains 100 houses,
505 inhabited by Cantonese Chinamen and Shans. Small boats can go a considerable distance further up the river, but Man-hao is the limit for large boats and may be considered as practically the head of navigation.

Mr Spinney had kindly arranged about a boat, so I was

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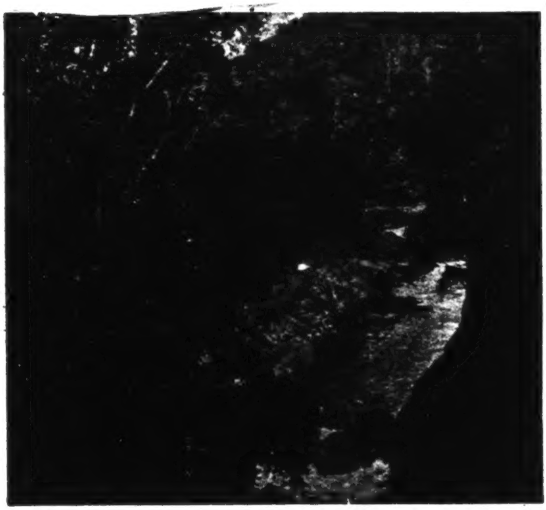
A bridge in the Mêng-ma valley

● 133



Photos by Major H. R. Davies

The Ching-ku Ho

Plate XLVI [Face p. 198]

done most of the fighting for them. This is an arrangement that seems to suit everybody, for as the Chinese put it, "The Lo-los are stupid men who are not afraid of dying." 701

The T'u-ssŭ keeps up a small standing army, and every one of his men that I saw was armed with a breech-loader. He also appears to recognise the importance of discipline, for a man goes in front of his troops with a red placard on which is written the T'ung-an-chou "Army Act." 703

For not obeying bugle calls—To be beheaded.

For being drunk and fighting—To be put in the stocks.

For losing arms or ammunition—To be beheaded.

For destroying the property of civilians—To be beheaded.

For being absent at night—To be put in the stocks.

For gambling—To be put in the stocks.

For extorting money by threats—To be put in the stocks.

For taking a wrong rifle—To be put in the stocks.

For buying things and refusing to pay—To be put in the stocks.

We slept the night at Li-chou which in spite of its name is not an official town of the *chou* class, though it is a prosperous commercial place. 000

The following day, the 22nd February, we had another level march to the town of Lu-ku which is built where the two sources of the An-ning Ho meet, one coming down from Mien-ning Hsien, and the other and smaller branch from the Hsiao-hsiang-ling pass.

I had now been along nearly the whole of the Chien-ch'ang valley and a little later, on my road to Mien-ning Hsien, I was able to see the rest of it, so I will summarise here my observations on it.

The plain stretches from a little beyond Mien-ning Hsien in the north down to the village of Hsin-kai-tzŭ in the south. It is, therefore, about 110 miles in length, but has not an average width of more than two miles. Its elevation at Mien-ning is 6,250 feet, and from this it slopes down by a scarcely perceptible descent to some 4,200 feet in the south. 133

Besides the two official cities of Ning-yuan Fu and 361

take to talking Chinese and to practising some of the Chinese S
religious observances. Then the women even will learn to ST
speak Chinese, will wear Chinese dress and even bind their 177
feet. Finally the Lo-lo language is gradually dropped, and the young men grow up knowing nothing but Chinese. This stage once arrived at, the transformation is nearly complete, and the next generation will probably indignantly deny their Lo-lo origin.

The same process goes on with Shan and other tribes, but in Tibet exactly the reverse takes place. The Chinese become Tibetanised, and the children of a Chinaman married to a Tibetan woman are usually brought up in the Tibetan religion and adopt Tibetan customs. In Tibet proper this is perhaps not surprising, as the country ruled by Lhasa is practically an independent kingdom and the Chinese have little influence there. But in places like Chung-tien and other districts well within China, it is somewhat astonishing to find a regularly appointed Chinese official submitting to the indignity of being a complete nonentity in the country he is supposed to rule.

I think the reason of this may be partly found in the enormous power that the lamas wield over the laymen. Forming, as they do, nearly half the male population they have all the authority in their hands, and it would be impossible for a Tibetan to conform to Chinese customs or religious observances without incurring their anger.

Another cause which keeps the Tibetan from being S
absorbed may be sought in the cold inhospitable nature of ST
his country. There is nothing to tempt the Chinese to [167]
emigrate into Tibet, and consequently they are never in sufficient numbers to influence the Tibetans round them. A similar cause has preserved some of the low-lying Shan States from absorption, the heat in this case being the reason that Chinamen do not settle there. S

Chung-tien stands in a large plain which at the time of [133] ●
our visit was very bare, as the snow had only just melted off it. A little later, when the warmth of the sun has had S
time to act on the soil, damp from melted snow, green ST
grass springs up everywhere. The height of the plain is [243]
11,800 feet, and it is too cold to grow rice or even maize: wheat is the chief crop.

291 ually wear are made of felt and soled with leather. Our own boots were in a deplorable condition after 2000 miles of Chinese roads, and we were glad to be able to get such serviceable substitutes as the Tibetan article. They are not, however, altogether comfortable: the sole is so thin that every sharp little stone can be painfully felt through it.

435 We had brought with us some musical boxes and field glasses as presents to reward friendly individuals who might assist us in our travels, but we soon found that among Tibetans there was not the slightest prospect of finding anyone friendly enough to deserve a present. So we began to make use of these things in our horse dealing bargains. Two musical boxes and a pair of glasses was the price of a very nice pony we bought from one of the military mandarins.

132 The climate of Ba-t'ang we found extremely pleasant, very much like a hot summer day in England. During our stay the maximum temperature was 80° and the minimum 55°. The heat can never be very great in summer. Snow, they say, falls occasionally in winter but
[241] always thaws by the middle of the day. The place lies
● 133 too high to cultivate rice, but wheat and barley grow well, and peach trees appear to thrive. We made the height 9,300 feet by both aneroid and boiling point thermometer. This is considerably higher than the observations of other travellers. Desgodins gives 8,065 feet, Rockhill 8,223 feet, Bower 8,500 feet, and Gill 8,546 feet[1].

758 The inhabitants of Ba-t'ang we found quite pleasant, and Manifold made them still more friendly by performing several operations for cataract. After the first patient—an old woman—had been successfully operated on and found she could see again, there was quite a run on Manifold's services and he restored the sight of seven people altogether. There was some danger that the patients would be too anxious to use their eyes again and would not keep them bandaged for the necessary four days, but we heard afterwards that all the operations were successful.

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[1] Hosie, however, who has visited Ba-t'ang since we were there, makes the height 9,184 feet.

5: Davies G-5 (1894-1900) 1909 AF16 Southwest China AF16

APPENDIX I

PHYSICAL DESCRIPTION OF YÜN-NAN.

THE main characteristic of the province of Yün-nan is that it is an extremely mountainous country. So small indeed are the areas of flat ground, that on a small scale map they are almost lost in the masses of hills. 133

Although the whole province is mountainous, different parts of it differ somewhat in the direction of the main ranges and in the general character of the country.

The western part of Yün-nan is furrowed by rivers, whose general course is from north to south. Taking them in order from the west, these are the Taping, the Shweli, the Salween, the Mekong, the Black River, and the Red River. Of these the first two and the last two have their sources in the province; but the Salween and the Mekong are rivers of great length, which run down from far in the interior of Tibet, and do not reach the sea till they have passed many hundreds of miles beyond the southern frontier of Yün-nan.

The basins of these six rivers, with their numerous tributaries, form a country of deep, narrow valleys and high mountain ranges running parallel to each other in a general north and south direction.

As the rivers and the principal affluents flow from north to south, it follows naturally that the heights of the mountains should gradually diminish as they run southward. In the extreme north-west corner of Yün-nan the country is thoroughly Tibetan: the tops of the ranges rise here to 15,000 or 20,000 feet, and the lowest river valleys are 7000 feet. From here heights decrease fairly regularly

• 133 till the hill-tops run down to as low as 5000 feet in the south of the province[1].

Of the rivers which water this country some have cut much more deeply than others into the original plateau formation. The Salween, for instance, where it crosses the main road from Burma to Yün-nan Fu, at about the 25th line of latitude, runs at an elevation 2000 feet lower than the Shweli and the Mekong, which flow parallel to it at only a short distance.

This makes it difficult to speak generally of the relative heights of the mountain ranges above the valleys. Speaking very roughly, and including the large tributaries as well as the main rivers, it may be taken on an average that the valleys run at an elevation some 3000 or 4000 feet below the tops of the mountain chains which bound them.

This then is the general character of the western and southern parts of Yün-nan, but the eastern half of the province is of a somewhat different formation. The country is here more of the nature of a plateau, plains are more numerous, and many of them contain lakes of considerable extent. It would be a mistake to suppose that this part of the province is not mountainous, but it is on the whole less so than western Yün-nan. There are larger stretches of level country, and the ascents from the plains to the hill-tops are usually shorter.

Roughly speaking the western boundary of this plateau country may be taken as a line drawn from the Yangtze at Shih-ku (lat. 26° 50′, long. 99° 55′) southward to Ta-li Fu and thence south-east to Shih-ping Chou (lat. 23° 40′, long. 102° 35′). To the east the plateau character of the country is maintained up to the border of the province, and in the extreme south-east corner the country is in many parts broken up into numerous small basins from which the water has no outlet. To the north and north-east the plateau continues till it nears the Yangtze, when it breaks up into deep valleys which, bounded by almost precipitous mountains, run down into the great river.

The streams on the extreme western fringe of this plateau drain into the Mekong and the Red River, but the main part of the water of eastern Yün-nan flows into the Yangtze and into the upper waters of the West River of Canton.

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[1] As an exception to the general rule that the mountains of Yün-nan decrease in height as they run southwards, I may mention that there are peaks of over 11,000 feet in the extreme south-west corner of the province.

The general direction of both these rivers is from west to east, but unlike western Yün-nan, where the tributaries follow the direction of the main streams, the affluents in eastern Yün-nan of these two big rivers join them more or less at right angles. Consequently, though the drainage of this part of the province eventually goes eastward, most of the lesser rivers and mountain ranges run north and south.

The rivers both in western and eastern Yün-nan run for the greater part of their courses through steep mountains, which sometimes form nearly precipitous gorges, and sometimes slope more gently up. Occasionally a valley widens out to a breadth of a few miles and forms a cultivated and thickly populated plain.

233 Ponies, mules, cattle, sheep, and pigs are extensively reared, and in the colder places large herds of yaks are to be met with.

135 Mineral wealth too is not wanting in this corner of Yün-nan. In the neighbourhood of Wei-hsi T'ing there are mines of silver and copper, and just over the border of Ssŭ-ch'uan in the semi-independent state of Mi-li (lat. 28° 10′, long. 100° 50′) gold is found in some quantity.

278 224 Among other products of the Tibetan part of Yün-nan must be mentioned musk, skins and furs, rhubarb, and other Chinese medicines.

438 This corner of Yün-nan, however, owing to the sparseness of its population and its distance from trade centres, is not at present of great commercial importance, though wool, timber, and gold may in the future become important articles of trade.

• 133 Let us then now consider the rest of the province. The highest plains here are at an elevation of 8000 feet, while some of the river valleys in the south of the province are even below 2000 feet. But these extremes are exceptional. The great bulk of the plains of Yün-nan lie at an average of 6000 feet, with the hill tops rising some 3000 or 4000 feet above them.

132 The climate is excellent. In winter there are often frosts at night, but not of great severity, while in the daytime the weather is usually bright and pleasant. Snow falls in the plains only very occasionally and does not lie long. All through the dry season, which lasts from the beginning of November to the latter half of May, there is no unpleasant heat. From June to September inclusive is the monsoon, and rain falls heavily at times, with fine intervals of a few days. In these intervals the hottest weather is experienced, but in the higher plains the thermometer seldom rises above 85°. By October the main force of the rainy season has been spent, though some rain may still be expected. An occasional wet day or two there may be even in the dry season, but Yün-nan, except in its north-eastern corner, is free from the continual mist, clouds, and rain which are prevalent in Ssŭ-ch'uan in the winter.

137 The vegetation of the country naturally varies much in different parts of the province. The flat part of the plains

•133

Plate LXV

[Face p. 324]

Photo by Captain W. A. Watts-Jones

The Hêng Chiang

Davies G-5 (1894-1900) 1909 AF16 Southwest China AF16

5. Davies G-5 (1894-1900) 1909 AF16 Southwest China AF16

SUMMARY OF PRELIMINARY RECONNAISSANCE OF PROPOSED YÜN-NAN RAILWAY.

Miles	From	To	Ruling gradient	Remarks
0 to 55	Kun-long	Mêng-chien	1 in 100	Easy route up the Nam Ting valley.
55 to 110	Mêng-chien	Mêng-lai	1 in 100	Difficult owing to steep-sided gorges.
110 to 145	Mêng-lai	Yün Chou	1 in 30	Over the Salween-Mekong watershed. About 15 miles of the ruling gradient.
145 to 210	Yün Chou	Mouth of Kung-lang River	1 in 100	Down the Nan-ch’iao Ho and up the Mekong. Difficult owing to gorges. Line quite level for considerable part of this.
210 to 250	Mouth of Kung-lang River	Nan-chien	1 in 20	Over Mekong-Red River watershed. About 16 miles of the ruling gradient.
250 to 295	Nan-chien	Yün-nan Hsien	1 in 25	Down one branch of Red River and up another. Ruling gradient only for last 8 miles. Much of this section on 1 in 50.
295 to 325	Yün-nan Hsien	Yün-nan-yi	1 in 100	Over plains of Yün-nan Hsien and Yün-nan-yi.
325 to 385	Yün-nan-yi	Near Sha-ch’iao	1 in 25	Rather intricate country.
385 to 490	Near Sha-ch’iao	Yao-chan-kai	1 in 50	Two tunnels, one on each side of Kuang-t’ung Hsien.
490 to 495	Yao-chan-kai	For 5 miles	1 in 20	Very steep ascent for 5 miles.
495 to 690	5 miles E. of Yao-chan-kai	N. end of Hsüan-wei Chou plain	1 in 50	Fairly easy line. A tunnel E. of An-ning Chou. Yün-nan Fu passed at mile 535.
690 to 760	N. end of Hsüan-wei Chou plain	Wei-ning Chou	1 in 20	Difficult line with a tunnel E. of the Hsüan-wei plain and some difficult gorges.
760 to 870	Wei-ning Chou	Ta-kuan-lao	1 in 25	As far as Chao-t’ung Fu fairly easy except for one difficult bit near T’ao-tien-pa. From Chao-t’ung Fu down the Hêng Chiang by difficult gorges.
870 to 960	Ta-kuan-lao	Sui Fu	1 in 100	Fairly easy down the lower Hêng Chiang and the Yangtze. Bridge over Yangtze near An-pien.

ALTERNATIVE ROUTE FROM WEI-NING CHOU.

760 to 926	Wei-ning Chou	Yung-ning Hsien	1 in 12 rack	Difficult line through intricate country. Rack lines on 1 in 16 and 1 in 12 would be necessary for a few miles.
926 to 976	Yung-ning Hsien	Na-ch’i Hsien	1 in 50	Fairly easy line down the Yung-ning Ho.

BRANCH LINE FROM MI-TU THROUGH HSIA-KUAN AND TA-LI FU TO LANG-CH’IUNG HSIEN.

70 miles	Mi-tu at mile 280	Lang-ch’iung Hsien	1 in 20	An easy line except for a steep ascent W. of Hung-ai where the ruling gradient is used for 6 miles. Most of the line is nearly level.

APPENDIX X

ITINERARY.

FIRST JOURNEY.

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Date	Place	Miles	Height in feet
	From **Nam-hkam**		3500
8 January, 1894 ...	Möng-ping	7	3500
9 „ „ ...	Mêng-mao	13	3500
10 „ „ ...	Halt		
11 „ „ ...	Chang-fêng-kai	16	3100
12 „ „ ...	Kying-hkan...	7½	3100
13 „ „ ...	Lung-ch'uan (Möng Wan) ...	9	3100
14 „ „ ...	Hu-sa (Ho-hsa)	10½	4500
15 „ „ ...	La-hsa	7	4500
16 „ „ ...	**Man-yün** (Man-waing)	10	2750
17 to 21 „ ...	Halt		
22 „ „ ...	Sa-re...	10	5250
23 „ „ ...	Shih-t'i	6	3900
24 „ „ ...	Nam-paung...	6	1200
25. „ „ ...	Myo-thit	14	400
26 „ „ ...	**Bhamo** (by boat)	23?	350

SECOND JOURNEY.

1894	From **Myitkyina**		500
26 to 29 December...	Sa-don	42	4664
30 Dec. to 3 Jan. 1895	Halt		
4 January, 1895 ...	Ch'ieh-ma-ho	8	4700
5 „ „ ...	San-si gorge	10	8900
6 „ „ ...	Mĕng-ka	10	5400
7 to 10 „ ...	Halt		
11 „ „ ...	Chan-hsi (San-si)	17	3300
12 „ „ ...	Hsiao-ti-fang	9	6200
13 „ „ ...	Mien-ch'in	15	4500
14 „ „ ...	**T'êng-yüeh-T'ing**	8	5365
15 & 16 „ ...	Halt		
17 „ „ ...	Kan-lan-chai	13	4800
18 „ „ ...	T'ai-p'ing-p'u	7	7400
19 „ „ ...	Lu-chiang-pa	11	2400
20 „ „ ...	P'u-p'iao	15	4500
21 „ „ ...	**Yung-ch'ang Fu**	15	5500
22 & 23 „ ...	Halt		

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Date	Place	Miles	Height in feet
24 January, 1895	Ta-li-shao	13	7200
25 „ „	Sha-yang	10	4800
26 „ „	**Ch'ü-tung**	13	5250
27 „ „	Sha-sung-shao	10	7350
28 „ „	Huang-lien-p'u	10	5200
29 „ „	T'ai-p'ing-p'u	10	7400
30 „ „	Yang-pi	10	5150
31 „ „	Ho-chiang-p'u	12	5050
1 February „	**Hsia-kuan**	10	6700
2 „ „	**Ta-li Fu**	8	6700
3 & 4 „	Halt		
5 „ „	Back to Hsia-kuan	8	6700
6 „ „	Hsün-chien	12	6250
7 „ „	Wu-li-hei	13½	6850
8 „ „	Ho-ti	11	
9 „ „	Hsi-hsin-chên	10½	7200
10 „ „	Hsin-niu-kai	10	3900
11 „ „	A-lu-shih	9½	6400
12 „ „	Sung-lin-t'an	9	5250
13 „ „	Hsin-ts'un	10	5850
14 „ „	**Shun-ning Fu**	12½	5800
15 „ „	Halt		
16 „ „	Lo-t'ang	12	5000
17 „ „	**Yün Chou**	11½	3800
18 „ „	T'ou-tao-shui	14½	5100
19 „ „	Yi-wan-shui	9½	5350
20 „ „	La-tien-p'o	11½	
21 „ „	Ta-niu-ch'êng	14	
22 „ „	**Mien-ning T'ing**	5½	4980
23 „ „	Halt		
24 „ „	Ping-yüan-hsün	15	6500
25 „ „	Wan-nien-chuang	10	3500
26 „ „	Mêng-yung (Mŏng Yawng)	7½	3750
27 „ „	Man-hkü	8½	3000
28 „ „	Mêng-sa (Mŏng Hsa)	13	4550
1 March „	Hsiao-p'u-tzŭ	11	6800
2 „ „	Mêng-chien	15	1850
3 „ „	Sum-nö	13	1800
4 „ „	**Mêng-ting**	8	1800
5 „ „	Hwe-hpyen	8	1800
6 „ „	Nam-hu	16½	1800
7 to 11 „	Halt		
12 & 13 „	Back to **Mêng-ting**	24½	1800
14 „ „	Man-hsak	8½	3850
15 „ „	Pang-maw	8	4300
16 „ „	Hsi-nga	13½	4600
17 „ „	Man-hpa	11½	4300
18 „ „	Wan-kang (near Mêng-sung)	16½	3250
19 „ „	Camp on Nam Tong-mi	12	5600
20 „ „	Nawng-hpaw	10½	5850
21 „ „	Hsia-mêng-yin	14½	3200
22 „ „	Halt		
23 „ „	Shang-mêng-yin	6	3350
24 „ „	Camp on top of range	11¼	6450

Date			Place	Miles	Height in feet
25	March,	1895	La-pa	13	5800
26	"	"	**Ch'üan-lo**	9½	4350
27	"	"	Nan-pei ferry	11½	2300
28	"	"	Mêng-lêng	15	3800
29	"	"	Mêng-chu	6	4850
30	"	"	P'ing-chang	14	4600
31	"	"	Chou-shui	13	3500
1	April	"	Hsiao-hei-ch'in	13	3500
2	"	"	Na-ku	7½	4850
3	"	"	**Ssŭ-mao T'ing**	8¾	4700
4	"	"	Halt		
5	"	"	Na-k'o-li	12	4600
6	"	"	**P'u-êrh Fu**	12½	4500
7	"	"	Halt		
8	"	"	Hsi-sa	13	2650
9	"	"	Man-ku	11	3650
10	"	"	Camp on Ch'ing-shui Ho	13½	4200
11	"	"	Lung-t'ang	8	5500
12	"	"	**Wei-yüan T'ing**	8	3150
13	"	"	Po-ling-t'an	16	5800
14	"	"	Mêng-ka	16	3750
15	"	"	Halt		
16	"	"	Ko-t'i-t'ang	13	5650
17	"	"	Ta-pêng	8	2800
18	"	"	Man-nung	14	6150
19	"	"	P'o-chio-chai	10	4800
20	"	"	Mêng-mêng	7½	3850
21	"	"	Ya-sai	8¼	6900
22	"	"	Pang-long	12	5000
23	"	"	**Kêng-ma**	14	3850
24	"	"	Halt		
25	"	"	Man-sawk	17	1900
26	"	"	Hsai-hkau	8	5700
27	"	"	Lung-cha	13	5450
28	"	"	Ma-li-p'ing	9	6950
29	"	"	K'a-fang	13	5400
30	"	"	Mêng-pun	7	4150
1	May	"	Lu-yin-t'ang	13½	5000
2	"	"	Han-kuai	6	3900
3	"	"	P'in-ka	15	5600
4	"	"	Camp near Ch'ên-chia-chai	11	7000
5	"	"	Hsiang-ta	10	5700
6	"	"	**Mang-shih** (Möng Hkwan)	10½	3350
7	"	"	Na-hka	13	3950
8	"	"	Ho-t'ou-ts'un	4	6400
9	"	"	Ho-yang	12	3300
10	"	"	Ung-lön	16	3650
11	"	"	Ning-kram	12	5100
12	"	"	Se-kao (near Hu-sa)	10½	4500
13	"	"	**Man-yün** (Man-waing)	18	2750
14	"	"	Sa-re	10	
15	"	"	Nam-paung	12	1200
16	"	"	Myo-thit	14	400
17	"	"	**Bhamo**	18	350

THIRD JOURNEY.

Date	Place	Miles	Height in feet
	From **Bhamo**		350
17 November, 1898	Myothit	19¼	400
18 „ „	Nampaung	12	1200
19 „ „	Yang-jên-ch'ang	7	4900
20 „ „	**Man-yün** (Man-waing)	13½	2750
21 „ „	T'ai-p'ing-kai	11	2700
22 „ „	Chan-ta (San-ta)	6½	2900
23 „ „	Kan-ai (Chiu-ch'êng)	13	2850
24 „ „	Tiao-kang	10¼	3500
25 „ „	Nang-sung-kuan	13	3600
26 „ „	**T'êng-yüeh T'ing** (Momien)	16	5365
27 & 28 „	Halt		
29 „ „	Mu-shui-ho	11	6300
30 „ „	Shun-chiang	6	5950
1 December „	La-hsing-kai	12¼	5850
2 „ „	Ma-li-pa	7½	6000
3 to 5 „	Halt		
6 „ „	Hsiao-hsin-kai	11¾	6100
7 „ „	Halt		
8 „ „	**Kai-t'ou**	10¼	5350
9 „ „	Wa-tien	8	5100
10 „ „	Ch'ü-ch'ih	8¾	5100
11 „ „	Hai-k'ou	10	5700
12 „ „	Chiang-tso	13¼	5400
13 „ „	**Kai-t'ou**	14	5350
14 „ „	Shan-yao	11	6750
15 „ „	Ssŭ-ling-kan	14	4400
16 „ „	Mêng-ku	5½	2550
17 „ „	Hsiang-ts'ai-tien	8	5200
18 „ „	Ma-lu-t'ang	10	5850
19 „ „	Êrh-tao-ch'iao	8	7100
20 „ „	Shui-fu-ssŭ	12½	5650
21 „ „	**Yung-ch'ang Fu**	6½	5500
22 „ „	Halt		
23 „ „	Ta-kuan-shih	8	6550
24 „ „	Niu-wang	10	5100
25 „ „	Shih-tien	13	5000
26 „ „	Yao-kuan	10½	6000
27 „ „	Kun-tou-shui	13¼	5200
28 „ „	Mêng-po-lo	7	2300
29 „ „	Ya-t'ang	11¾	5200
30 „ „	Hsiao-shih-ch'iao	14¼	5100
31 „ „	Mêng-p'êng	17	3500
1 January, 1899	Mêng-tui	13½	3250
2 „ „	Na-hsang	14¼	3550
3 „ „	**Ma-li-pa** (Taw-nio)	8¼	3500
4 to 7 „	Halt		
8 „ „	Nawng-long	16	3500
9 „ „	**Kun-long**	12	1800
10 to 12 „	Halt		
13 „ „	Hung-tung-ling	13½	6200

Date	Place	Miles	Height in feet
14 January, 1899	**Ma-li-pa**	14½	3500
15 to 29 „	Halt		
30 „ „	Na-hsang	8¼	3550
31 „ „	Ch'üan-kang	14	2450
1 February „	T'ou-tao-shui	6	5500
2 „ „	Ts'ai-chia-chai	11	5800
3 „ „	A-a-shan	7	6300
4 „ „	Man-kang	9¾	5300
5 „ „	**Chên-k'ang** (Möng Cheng)	13¾	2950
6 „ „	Mêng-ti	9	2600
7 „ „	Shan-kai	10	4650
8 „ „	Hsi-la	8¼	3500
9 „ „	Ta-li-ssŭ	14	5950
10 „ „	Sung-shan	11¾	6300
11 „ „	Pa-pao-shan	9	6050
12 „ „	**Yün Chou**	14	3800
13 & 14 „	Halt		
15 „ „	Mêng-lang	15	4150
16 „ „	Hsin-ts'un	11	5700
17 „ „	A-lo-kai	7	4150
18 „ „	Hsiao-ch'in	10	4150
19 „ „	Halt		
20 „ „	Kung-lang	12½	5150
21 „ „	Chi-lung	10	6500
22 „ „	Miao-shan	11½	7650
23 „ „	**Mêng-hua T'ing**	14¼	5950
24 „ „	Hsün-chien	16¾	6250
25 „ „	**Hsia-kuan**	12	6700
26 „ „	**Ta-li Fu**	8	6700
27 & 28 „	Halt		
1 March „	**Chao Chou**	15½	6750
2 „ „	Hung-ai	16½	5950
3 „ „	Kou-ts'un-p'u	12½	6800
4 „ „	Mu-pang-p'u	14	6775
5 „ „	Halt		
6 „ „	P'u-p'êng	12½	7125
7 „ „	T'ien-shêng-t'ang	8¼	7700
8 „ „	Ta-fu-ssŭ	6¼	6800
9 „ „	**Chên-nan Chou**	16	6300
10 „ „	Ta-shih-p'u	14½	6300
11 „ „	**Ch'u-hsiung Fu**	7	6150
12 to 16 „	Halt		
17 „ „	Hsiao-yao-chan	9	6250
18 „ „	**Kuang-t'ung Hsien**	10	6300
19 „ „	Shê-tzŭ	13	6100
20 „ „	Ta-tz'ŭ-ssŭ	11	6900
21 „ „	Yao-chan-kai	6¼	5700
22 „ „	Lu-p'iao-kai	11½	6500
23 „ „	**An-ning Chou**	15½	6300
24 „ „	**Yün-nan Fu**	19¼	6400
25 Mar. to 2 Apr.	Halt		
3 April „	Ch'i-tien	18	7050
4 „ „	**Yi-liang Hsien**	15½	5300
5 „ „	Ta-shao	10	6600

Date			Place	Miles	Height in feet
6 April, 1899			A-yu-p'u	17	6500
7	„	„	**Lu-liang Chou**	12	6200
8	„	„	Pan-ch'iao	9	6200
9	„	„	Yüeh-chou	16	6300
10	„	„	**Ch'ü-ching Fu**	15½	6450
11	„	„	Chiu-lung-shan	13½	6700
12	„	„	Lan-yen-p'u	17½	7225
13	„	„	Pan-ch'iao	17	6800
14	„	„	**Hsüan-wei Chou**	10	6850
15	„	„	Halt		
16	„	„	Chiu-p'u-tzŭ	18	6650
17	„	„	Hsin-t'ien-p'u	9	7250
18	„	„	Chan-p'o	10	6850
19	„	„	Yao-chan	10	7050
20	„	„	Halt		
21	„	„	**Wei-ning Chou**	9	7500
22	„	„	Ssŭ-p'u	13½	8000
23	„	„	Hun-shui-t'ang	6	6600
24 & 25		„	Back to **Wei-ning Chou**	19½	7500
26	„	„	Halt		
27	„	„	Shuang-lung-ch'iao	10½	7225
28	„	„	Ch'ing-mo-ti	18½	6925
29	„	„	Chia-hsi-ho	13	6100
30	„	„	Kung-shan	11	8425
1 May		„	Ch'in-k'ou-t'ang	18½	7325
2	„	„	**Tung-ch'uan Fu**	16	7250
3	„	„	Ta-ch'iao	14	7550
4	„	„	Shao-p'ai	11½	8100
5	„	„	Lai-t'ou-p'o	12½	8500
6	„	„	Hsiao-lung-t'an	18	7275
7	„	„	Liu-shu-ho	12½	6825
8	„	„	Yang-kai	21½	6350
9	„	„	Shang-tui-lung	21	6500
10	„	„	**Yün-nan Fu**	20	6400
11 to 14		„	Halt		
15	„	„	**Ch'êng-kung Hsien**	12½	6325
16	„	„	Hua-lo-ts'un	19	6500
17	„	„	Hai-mên-ch'iao	17	5900
18	„	„	**T'ung-hai Hsien**	20	6200
19	„	„	Kuan-yi	14¾	5000
20	„	„	Hsin-fang	17	4900
21	„	„	Mien-tien	14	4900
22	„	„	Chi-kai	17½	4550
23	„	„	**Mêng-tzŭ Hsien**	15	4725
24	„	„	Halt		
25	„	„	A-san-chai	6¼	5350
26	„	„	Yao-t'ou	17	4100
27	„	„	**Man-hao**	6½	650
			Thence down Red River by boat and steamer.		

FOURTH JOURNEY.

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Date	Place	Miles	Height in feet
	From **Myitkyina**		500
15 November, 1899	Nam-long	7½	500
16 „ „	Kazu	11½	500
17 „ „	Nkrang	11½	3675
18 „ „	**Sima**	7	4525
19 „ „	Shi-ràw-kawng	9½	3950
20 „ „	Mêng-lung	13	5900
21 „ „	Ho-pyek	13½	2750
22 „ „	Na-hseng	14	2800
23 „ „	Tiao-kang	13	3500
24 „ „	Nang-sung-kuan	13	3600
25 „ „	**T'êng-yüeh T'ing** (Momien)	16	5365
26 „ „	Halt		
27 „ „	Back to Nang-sung-kuan	16	3600
28 „ „	Chai-t'ang	8¾	6800
29 „ „	Shan-tung	9½	4800
30 „ „	Man-p'a	12½	4650
1 December	**Lung-ling T'ing**	11	5200
2 „ „	Mêng-mao	9½	6400
3 „ „	Pai-ta	17½	4650
4 „ „	Ma-lu-t'ang	8¾	4600
5 „ „	Yao-kuan	15	6000
6 „ „	Wan-tien	12¼	2400
7 „ „	Kan-kou	11½	6100
8 „ „	Ta-mêng-t'ung (Old)	13¾	3700
9 „ „	Li-pa-sa	14½	6200
10 „ „	Li-ma-hsi	19¼	4800
11 „ „	**Yün Chou**	16½	3800
12 „ „	Halt		
13 „ „	Hsiao-chu-ching	12½	6150
14 „ „	Pan-ho	13¼	5250
15 „ „	Chiang-chia-p'u	13¾	5650
16 „ „	Pang-tung-kai	10½	4950
17 „ „	T'uan-shan	8¾	3750
18 „ „	Pai-yin-ch'in	10¾	6150
19 „ „	Hou-yao (in Ching-ku plain)	12½	4650
20 „ „	Lung-t'ang-kai	11	4550
21 „ „	**Wei-yüan T'ing**	14	3150
22 „ „	P'ing-chai	14	3350
23 „ „	Têng-t'ung	16	4000
24 „ „	Pa-t'ou	13½	6400
25 „ „	**Hsin-fu**	11½	3400
26 „ „	Man-lien	11½	3350
27 „ „	Man-pieh	13¼	4500
28 „ „	Mo-po	11¼	4400
29 „ „	Mo-hei	13¾	4150
30 „ „	**P'u-êrh Fu**	12	4500
31 Dec. & 1 Jan. 1900	Halt		
2 January „	Back to Mo-hei	12	4150
3 „ „	Hsia-pa-pien	15	3150
4 „ „	T'ung-kuan	9½	5200

Date	Place	Miles	Height in feet
5 January, 1900	Chang-lu-p'ing	13¼	3300
6 „ „	**T'a-lang T'ing**	15½	4600
7 „ „	Yi-wan-shui	12¼	5600
8 „ „	Ma-lu-t'ang	12¼	6950
9 „ „	A-ku-lu	13	5100
10 „ „	Ta-t'ien-fang	11	1700
11 „ „	Chiu-ti-mo	7½	5100
12 „ „	**Hsin-p'ing Hsien**	16	5425
13 „ „	Hsin-kai	10¼	5300
14 „ „	Hu-lu-p'êng	12	6500
15 „ „	Ssŭ-ch'êng	9½	6000
16 „ „	P'u-pei	18	5400
17 „ „	**Yi-mên Hsien**	4¾	5350
18 to 20 „	Halt		
21 „ „	Hsiao-lung-t'ang	18½	6600
22 „ „	**An-ning Chou**	18	6300
23 „ „	**Yün-nan Fu**	19¼	6400
24 to 28 „	Halt		
29 „ „	Êrh-ts'un	14½	6200
30 „ „	Chê-pei	18¼	5900
31 „ „	**Wu-ting Chou**	17	6000
1 February „	Halt		
2 „ „	Hsiao-ts'ang	17½	6000
3 „ „	Chiu-ts'un	9½	5800
4 „ „	Ch'ien-ch'ang	21	5600
5 „ „	Ts'u-chü	8½	7700
6 „ „	San-ying-p'an	16	7900
7 „ „	Chiao-hsi	14¾	7800
8 „ „	K'a-hsi	16	7800
9 „ „	Ta-p'ing-ti	13¾	3950
10 „ „	Ta-shih-p'êng	11¾	8800
11 „ „	Pai-tzŭ-t'ien	8	7000
12 „ „	Suan-shui-ho	10	6350
13 „ „	Chang-kuan-ch'ung	15	6200
14 „ „	**Hui-li Chou**	13½	6300
15 „ „	Pai-kuo-wan	19¼	7000
16 „ „	Mo-so-ying	13	4800
17 „ „	T'ieh-chiang-fang	17½	4400
18 „ „	Liang-lu-k'ou	19¼	4700
19 „ „	Huang-shui-t'ang	13¾	4950
20 „ „	Ma-tao-tzŭ	19¼	4950
21 „ „	Li-chou	20	5400
22 „ „	Lu-ku	18½	5600
23 „ „	Têng-hsiang-ying	19	7850
24 „ „	Hsiao-shao	10¾	6900
25 „ „	**Yüeh-hsi T'ing**	10¼	6100
26 & 27 „	Halt		
28 Feb. to 2 Mar.	Back to Lu-ku	40	5600
3 March „	**Mien-ning Hsien**	20	6200
4 „ „	Ha-ha-hsün	9½	7400
5 „ „	Ma-t'ou-shan	8	7600
6 „ „	Lu-ning-ying	15½	6700
7 „ „	Halt		
8 „ „	Chieh-hsing	9½	7400

Date	Place	Miles	Height in feet
9 March, 1900	Hua-k'an	10¾	8100
10 „ „	No-po	10¼	6850
11 „ „	Mo-tzŭ-kou	6¾	7450
12 „ „	Ma-huang-kou	10	10300
13 „ „	Mo-lien	9¾	10600
14 „ „	San-ko-ya (Lower)	11¾	6850
15 „ „	Pê-tiao	3	7400
16 „ „	Camp west of Pa-êrh	11¼	11800
17 „ „	K'u-lu	14½	12500
18 „ „	A-pê-ti	15	8900
19 „ „	**Mi-li**	20¼	9500
20 „ „	Camp in forest	9	11800
21 „ „	Camp at hut	15¾	14600
22 „ „	Lei-lung	12	7050
23 „ „	Tzŭ-lo	11¾	9500
24 „ „	Camp near Wei-jih	15	8500
25 „ „	Camp near Ran-da	13¼	13750
26 „ „	Ming-yu-ho	9	9600
27 „ „	Ta-lung	14¼	12300
28 „ „	**Chung-tien**	19¼	11500
29 „ „	T'an-tui	18¾	10200
30 „ „	Hsien-to	18	7600
31 „ „	Pang-tzŭ-la	12¼	7250
1 April „	Pê-kê	13¼	10500
2 „ „	Camp in forest	6½	14200
3 „ „	Camp	13	13800
4 „ „	**A-tun-tzŭ**	8¾	11500
5 to 10 „	Halt		
11 „ „	Chia-pieh	13½	8000
12 „ „	Yang-tsa	10½	7000
13 „ „	Londre	8¾	7800
14 „ „	Camp in forest	5½	10000
15 „ „	On and back to same camp	3½	10000
16 „ „	Back to Londre	5½	7800
17 to 19 „	Back to **A-tun-tzŭ**	33¾	11500
20 to 22 „	Halt		
23 „ „	Liu-t'ou-chiang	13½	7800
24 „ „	Chiung-pu	12¼	10100
25 „ „	Na-pu	13¼	8000
26 „ „	Pa-mien	9	9300
27 „ „	Pa-yung-ko	12½	11500
28 „ „	**Ya-k'a-lo**	10¼	9500
29 „ „	Halt		
30 „ „	La-ta-ting	6½	12200
1 May „	Up pass and back to La-ta-ting	7	
2 „ „	Ya-k'a-lo and back to La-ta-ting	13	
3 „ „	Hnga-tsa	14¼	12200
4 „ „	Chia-ni-ting	14	13500
5 „ „	Pa-mu-t'ang	9¾	13200
6 „ „	Te-ga-ting	15½	10200
7 „ „	Chu-pa-lung	12½	9000
8 „ „	**Ba-t'ang**	19½	9400
9 to 11 „	Halt		
12 to 18 „	Back to La-ta-ting	85¼	12200

Date	Place	Miles	Height in feet
19 May, 1900	Gönra rope bridge	8	8400
20 " "	Ya-k'a-lo	3½	9400
21 " "	Camp beyond La-ta-ting	7¾	13500
22 " "	Hnga-tsa	13	12200
23 " "	Bo-tsa	9¾	11300
24 " "	Camp in snow	11	14100
25 " "	Ya-ra-no	5	11000
26 " "	Go-nia ferry	8¾	8600
27 " "	Camp in forest	9	12800
28 " "	Ruian-dzong-tza	14½	10200
29 " "	Ya-ra-gong	13¼	11900
30 & 31 "	Halt		
1 June "	Shepherd's hut	9½	12000
2 " "	Den-bo-nong	12	10200
3 " "	Camp on high range	11¾	15300
4 " "	Camp under rock	10¼	13800
5 " "	Chong-tsa-gong	12½	11600
6 " "	Ra-nong	15	12800
7 " "	Ndzon-dza	14	15000
8 " "	T'ou-t'ang	8¾	15000
9 " "	Li-t'ang	13½	13800
10 " "	Halt		
11 " "	Ho-ch'u-k'a	15	13300
12 " "	Tsa-ma-la-t'ung	14½	13300
13 " "	Hsi-ngo-lo	7½	12000
14 " "	Ma-kê-tsung	16½	12000
15 " "	Ho-k'ou	8	9400
16 " "	Wo-lung-shih	20	13400
17 " "	Tung-ngo-lo	15	12050
18 " "	A-niang-pa	15	12500
19 " "	Ché-to	19½	11300
20 " "	Ta-chien-lu	9	8400
21 " "	Wa-ssŭ-kou	16½	5300
22 " "	Lu-ting-ch'iao	16¼	4850
23 " "	Ming-kan-shan	14¾	6700
24 " "	Chu-shih-p'ing	16½	4000
25 " "	T'ien-ch'üan Chou	20¼	3000
26 " "	Ya-chou Fu	20½	2500
	Thence by raft down Ya River to Chia-ting Fu. By boat to I-chang, and steamer thence to Shanghai, arriving 19 July		

SUMMARY OF DISTANCES

1st journey	139 miles
2nd "	1313¼ "
3rd "	1659¾ "
4th "	2441 "
Total distance travelled by ro	5553 miles

[NO p. 412]

166 the neighboring provinces of interior China. The influx of these heterogeneous groups of immigrants brought with it many ideas and practices to help in the adjustment of the people to their new environment, particularly in connection with agricultural and forestry land use. This fact helps to explain the present heterogeneity of the agricultural landscape of the Basin.

463 439 Agriculture and forestry are the outstanding features of the economy of the Szechuan Basin. Approximately 85 per cent of the people gain their livelihood from agricultural pursuits. In terms of exports from the Basin, however, the leading item, Tung oil, is a forest product. Most of the other exports are either agricultural or forestry products.

241 312 In so far as agricultural land use is concerned, nowhere else in China except in Szechuan Basin does one find terraced fields so extensively, elaborately, and finely made, and irrigation systems so greatly diversified and ingeniously devised. The Basin is almost literally a country of "millions of minute steps" and a land of "thousands of small ditches." The terraced fields and the irrigation ditches, together with the hard-working peasantry have helped to transform the otherwise hostile rugged Szechuan Basin into a smiling garden.

Other unique features of the Basin's agricultural land use include the age-old but the recently much publicized Tung Shui Tien (winter storage water field) system; the cultivation of Tsai Seng Tao (double-growth) variety rice; the numerous special methods of soil culture, fertilization, composting, and crop rotations; and the various elaborate systems of inter-culture and synchronization of crops.

•133 As has been implied, the Basin is a natural unit. Its combination of surface, climate, soil, and drainage is unlike that of any other part of China. In large measure, the interior of the Basin within the mountainous border is made up of hill country which varies from hilly areas of low relief in the south to the fairly high parallel anticlinal ridges in the east and to a border of complex hills at the north. Near the western edge of the Basin, the hills give way to the Chengtu Plain, a broad piedmont alluvial plain, the most productive part of the Basin.

132 Climatically, the Basin has a phase of the "humid subtropical" type of climate.[1] The Basin extends from latitude 28

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[1] G. Trewartha, An Introduction to Weather and Climate, Plate I, 1937.

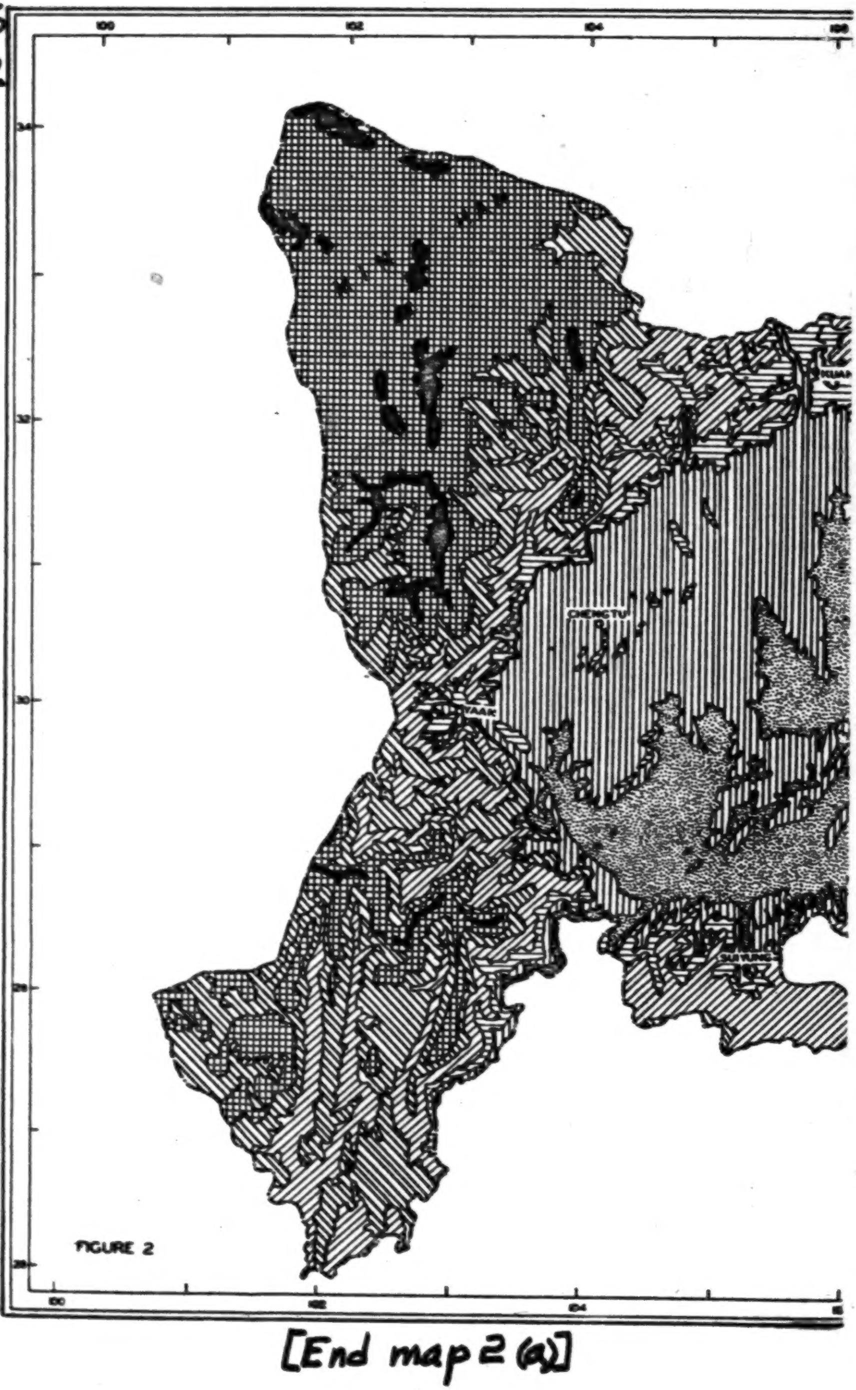
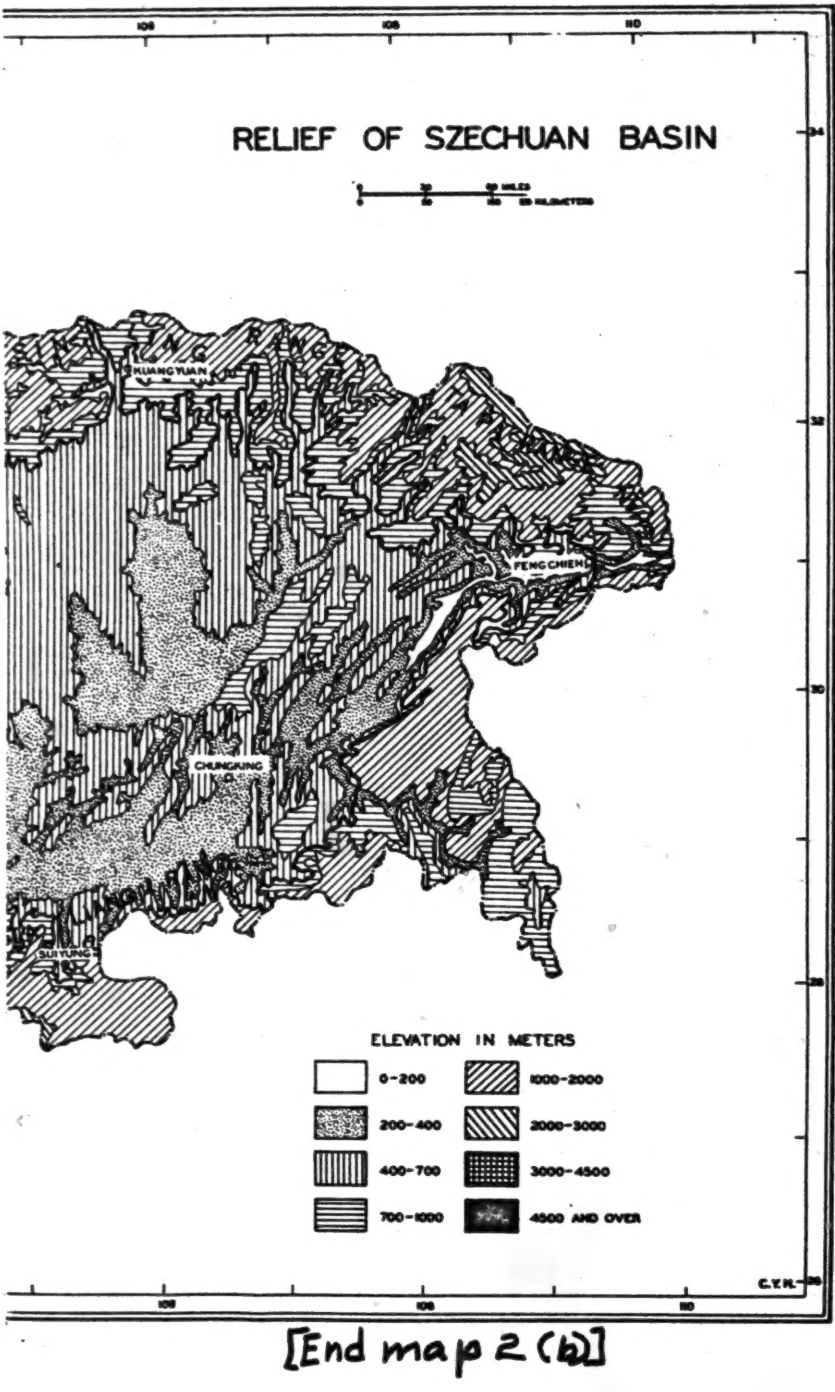

100
102
104
34
32
30
28
CHENGTU

FIGURE 2

[End map 2 (a)]


RELIEF OF SZECHUAN BASIN
0 30 60 MILES
0 50 100 150 KILOMETERS
106
108
110
34
32
30
28
26
HUANGYUAN
PENGCHIEH
CHUNGKING
SUIYUNG
ELEVATION IN METERS
0-200
200-400
400-700
700-1000
1000-2000
2000-3000
3000-4500
4500 AND OVER
C.Y.H.

[End map 2 (b)]

to 33 degrees North. It has a mild winter with little or no frost 132
or snow, and a warm summer. The average annual precipitation in most parts of the Basin is about 34 inches, with some rain in every month. The summer months, however, have more rain than the winter months. There is almost continuous high relative humidity, and wind, on the whole, is conspicuous by its absence.[1]

The Basin is drained and practically bisected by the 133 ●
Yangtse River. The Yangtse enters the Basin at the southwest and leaves it at the northeast. Within the Basin, the Yangtse is fed by three sets of tributaries--one from the north, one from the northwest, and one from the south. The northern and northwestern tributaries rise in the high mountains which rim the north and northwestern part of the Basin, and their flow greatly exceeds that of the southern set of tributaries. On the whole, the Basin, with its hilly terrain, is well drained. In fact, problems of erosion are much more acute than problems of drainage.

Generally speaking, the soils of the Basin fall into two 134
main groups. One is the extraordinarily fertile soil of the Chengtu Plain and the other is the moderately fertile soil known as the "purple-brown (forest)" type,[2] which dominates in most parts of the Basin. The Chengtu Plain soil is derived from the alluvial deposits of the Min River. The richness of this soil is greatly enhanced by its annual renewal through the overflow of the Min. The Chengtu Plain soil is noted for its very dark color, great depth, and rich humus content. The "purple-brown" type, developed in deciduous forests growing on parental material derived from the friable, cretaceous shales and sandstones, is only moderately fertile for agricultural use. This soil is noted especially for its loose texture and easily-eroded qualities. Moreover, this soil has a peculiar characteristic of absorbing and loosing (evaporating) water quickly.[3] One evening's thick fog may cause the whole depth of the surface soil to be thoroughly moistened and saturated, whereas a continuation of clear sky for several days may cause the soil to dry up and crack. In general, the "purple-

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[1] Bureau of Reconstruction, Annual weather report (Szechuan, 1939), p. 29.

[2] J. Thorp, Soil Geography of China (1936), p. 200.

[3] H. Yu, "A Preliminary Observation of the Purple-Brown Soils of Szechuan Province," Soils Quarterly, January, 1941, p. 39.

134 brown" type soil is rich in mineral foods but rather low in humus content and is shallower in depths than the soils of the Chengtu Plain. However, on account of the hilly nature of most parts of the Basin, soil characteristics vary greatly in different local areas.

311 241 In many ways, the distribution of agriculture and forestry and the features associated with these uses of the land are related to and conditioned by one or more of the natural elements characterized in the foregoing paragraphs. Forests mantle the [137] mountain slope, and tree crops are characteristic of many of the hillsides. Agriculture dominates the Chengtu Plain, and is conspicuous along the numerous valley floors and on the terraced hills.

•133 311 Of all the natural elements at work in the Basin, topography is a highly important factor that affects the agriculture land use and other forms of cultural life, and the adjustment to this natural element is especially conspicuous. First of all, the close correlation between the cultivated-land index and the topography is most striking. In general, there is a consistent tendency for the cultivated-land index, and the population patterns as well, to decrease from the center of the Basin to the peripheral highlands. Second, the adjustment of the Basin's settlement forms to the topography is outstanding. As in most parts 361 of China, about 85 per cent of the population of Szechuan Basin is rural. But unlike any other part of China, there are comparatively few large villages and nuclear hamlets, with the exception of the Hsien[1] capitals. This remarkable fact is largely a result of the rugged and extremely dissected topography of the Basin. The settlement forms have had to adjust to the local topography. This is particularly true in the eastern and northern parts of the Basin.

312 In the agricultural adjustment to water resources and drainage patterns, the following examples may be noted. First, by seizing the torrential flow of the Min River, the Basin has built not only the oldest but also the most successful and easily-maintained irrigation system of all China. This system has freed the Chengtu Plain from the hazard of floods and droughts, and has insured the unbroken agricultural prosperity of the Basin. This

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[1] Hsien or district in China corresponds somewhat to the county unit of the United States.

the Szechuan-Yunnan highway will relieve to a considerable degree the traditional difficulty of transporting the wax insects for the white-wax tree industry. 314

In both mining and manufacturing, rapid progress has also been made. During the past few years, the Basin's coal production has been increased 400 per cent, iron production 300 per cent, and placer mining 200 per cent. Besides, the Basin is rapidly developing into a new industrial center of free China. It is now the home of over 61 per cent of free China's machine industry. At present the Basin accounts for about 40 per cent of the total manufacturing capacity of all free China. 316 178

Even in the most chronic and difficult problem of transportation land use, rapid progress is being made. Numerous commercial air lines have been inaugurated since 1932, many railways (some of them already under construction) have been projected; and the highway network of the Basin has been partly completed. Of the Basin's 136 districts, 85 districts, or 62 per cent, now have highway connections. Most important of all, the various projects for canalization of the numerous streams in the Basin have been vigorously advanced. Many of these projects (such as the Chi and Upper Chialing rivers) have already been completed. These achievements and many more to follow will make a long stride toward the satisfactory solution of the Basin's acute transportation problem. 489

As to the future development of the Basin, one may approach the problem from two standpoints: first, the future prospect of the Basin as a base of operation against the Japanese invasion; and second, the future position of the Basin when peace returns once more. 133

As regards the first objective, the future of the Basin is bright. First of all, here, in Szechuan Basin, one finds a unique geographic region which has the interesting and fortunate combination of a mild south-China climate (with a long growing season), a rich north-China mineral resource (particularly coal and iron), a Yangtse Delta agricultural wealth, and above all, a southwest-China rugged mountain topography which provides protection against military invasion. The agricultural richness of the Basin is particularly important in maintaining a sustained self-sufficiency and should enable the region to hold longer against invading forces than would otherwise be possible. 241

● 133 Furthermore, the high strategic quality of the Basin's geographic position and its rugged topography have strengthened the Basin's capacity to serve as a citadel against military encroachment from outside. By virtue of its inland position, over 1,500 miles away from the coast, the Basin is reasonably protected from an enemy's navy attack, against which the rest of China is now almost completely helpless. Moreover, the Basin's rugged terrain and surrounding mountain ranges make land attack, even by modern mechanized forces, extremely difficult. Above all, thanks to the prevailing cloudiness in the Basin during most of the year, and to the presence of numerous rocky hillsides which can readily provide air-shelters, even modern air attacks have been reduced in intensity and effectiveness.

000 Taking all the above factors into consideration, Szechuan Basin is geographically better qualified than any other part of China to serve as a base for carrying on China's war of emancipation against barbaric invasion. It has served this purpose successfully many times during the historical past. No doubt, it will assume this important responsibility again. Being now better equipped and better prepared, the Basin will probably give an even more satisfactory account of itself this time. Time and space, history and geography, the two best friends of China, have always been at her side and have never failed her so far throughout her long existence as a great civilized nation. Undoubtedly, they will be with her this time. The Basin will again do its share to substantiate this truth.

As regards the second objective, the peace time future of the Basin is equally promising. With the diverse agricultural products, abundant forestry resources, and other assets, it should be sound national policy and good geographic division of labor to develop the Basin as a self-sufficient and well-endowed region in the vast space of China's interior. The development of the Basin will not only help to secure a more sound and well-balanced national economy in peace time, but also will provide a better preparation for national emergencies which may take place at any moment in this disturbing world. Such a development has been made particularly imperative in view of the recent opening-up of southwest China to the western world by way of the Indian Ocean. For the first time in her history, China has thus been brought into direct contact (by modern transportation) with the western world

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The total number of people in the province at the present time is estimated at about fifty-six million persons. This means an increase of seven or eight million inhabitants during the past few years as a result of the mass migration from the lower Yangtse Valley.[1] As the total land area of the province is 360,159 square kilometer[2] (excluding areas for districts recently incorporated under Sikang jurisdiction), this gives an average population density for the province as a whole of 135 persons per square kilometer. For the Basin proper, as delimited in the present study, the total population is approximately 43,000,000 persons.[3] Thus in the same manner, the average population density for the Basin proper is 285 persons per square kilometer.

The Szechuan Basin with its present population constitutes a miniature melting-pot within the great melting-pot of China. The influx of the new and many heterogeneous groups of immigrants into the Basin (especially since the famous massacre of the Chang Hsien Chung of late Ming dynasty) brought with it many new ideas and new techniques, particularly in connection with agricultural practices. This later fact helps to account, as we shall see later, for the present heterogeneity of its agricultural landscape.

A. Major Natural Elements of the Basin

1. Surface Configuration

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The Szechuan Basin is a great synclinal depression surrounded by moderate to high mountains. The "basin" character of this area is demonstrated graphically by two cross-section profiles, one drawn along the line 30.30 N. parallel (Fig. 3) and the other along the 106 E. Meridian (Fig. 4). As these profiles show, the land slopes toward the center of the Basin from all directions. This is particularly conspicuous from north and northwest to south and southeast, as is further evidenced by the direction of the northwest-southeast flow of the main tributaries of the Yangtse (Fig. 5).

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[1] Report of Chungking Municipality (1940).

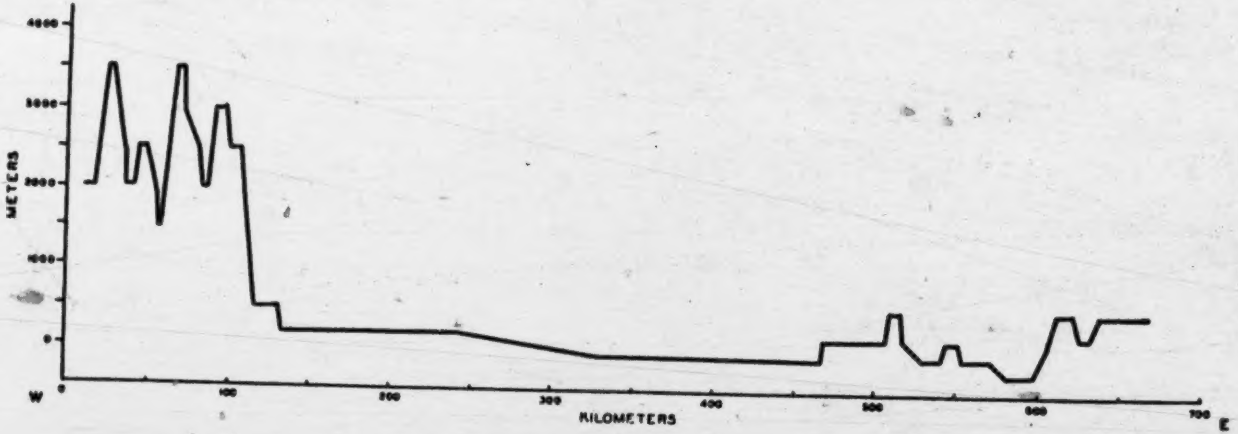
[2] Szechuan Provincial Government, Report of the Bureau of Military Survey (1939).

[3] This figure is arrived at by the writer by subtracting population of all Hsien (counties) lying outside of the boundaries of the Basin as delimited in the present study.

FIGURE 3

PROFILE OF SZECHUAN BASIN

SECTION AT 30°30′ DEGREES NORTH LATITUDE

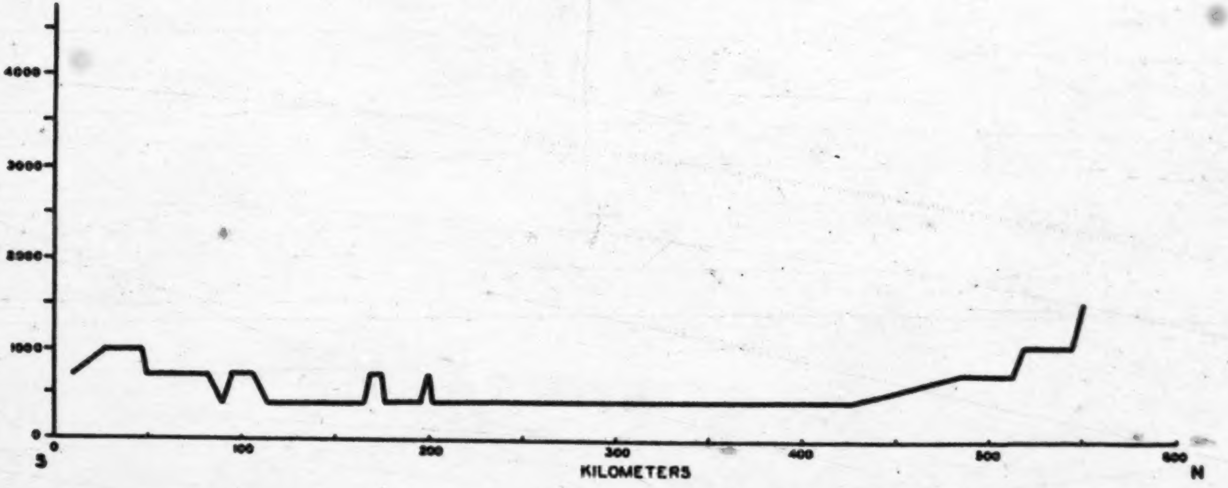


[Face p. 15 (a)]

FIGURE 4

PROFILE OF SZECHUAN BASIN

SECTION AT 108 DEGREES EAST LONGITUDE



[Face [p.15 (b)]

[Face p.15(c)]

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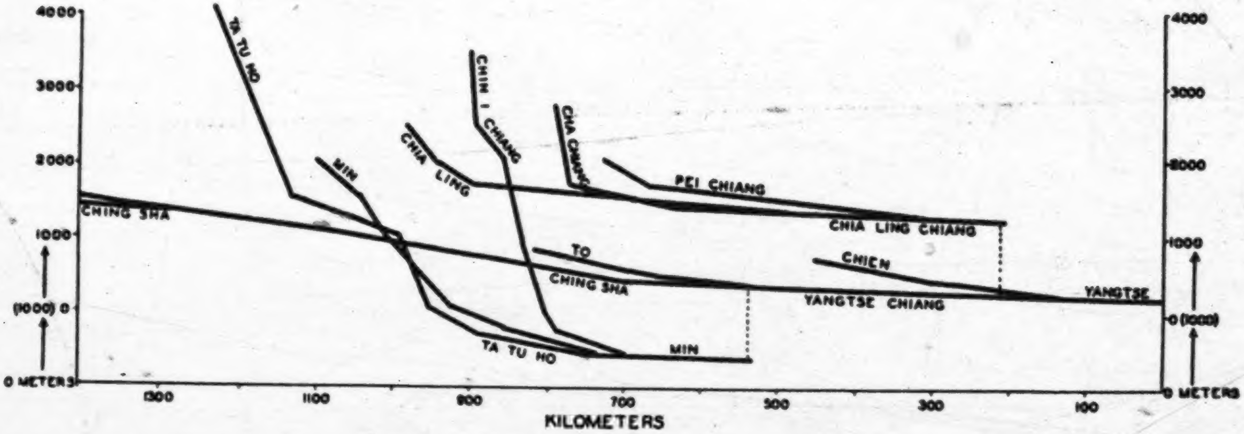
7: Hu K-5 (1934-) 1946 AF16 Southwest China AF16

FIGURE 5

PROFILES OF PRINCIPAL STREAMS
SZECHUAN BASIN



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The surface configuration of the Basin is dominated by numerous rolling, dome-shaped or flat-topped (mesa-like) hills (Fig. 6) of various magnitudes. They look much like graves--only on a larger scale--and are formed mainly by beds of cretaceous sandstone and shale. These hills are, in general, not over 100 meters in height, but in most instances, the lower ones are less than 50 meters high. Commonly they are isolated from each other and do not form any regular system or pattern. The local relief between these hills varies from locality to locality, and differs according to the relative magnitudes of the hills themselves.[1]

Another striking topographic feature of the Basin is the presence of a number of anticlinal ridges, which are formed by the resistant limestones and sandstones of the Triassic, Jurassic, and even Permian periods. Most of these anticlines possess an axial trend of a northeast-southwest direction, being in most cases parallel to the bases of the trapezoid (Fig. 2). Many of them are open and symmetrical anticlines of considerable linear extension.[2]

Aside from some narrow strips of valley bottom lands found in the To, the Chialing, and the Fou river valleys, the most impressive scene in the Basin's surface configuration is the famous rich Chengtu Plain (Fig. 2), the only large continuous tract of flattish land in the whole Basin. This plain offers a striking contrast to the hilly or mountainous configuration of the rest of the Basin. It is a bona fide clear-cut geographic sub-unit within the Basin. It possesses a distinct geographic personality of its own and represents one of the most prosperous agricultural regions of the whole Basin.

2. Drainage Patterns

From the air, the principal drainage pattern of the Basin looks roughly like a netted-veined leaf with the Yangtse conspicuous as its midrib, and the main tributaries, both north and south,

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[1] Unfortunately, on a map drawn at the present scale shown here (1:2,000,000) and with the large contour intervals (200-1,500 meters), this local relief cannot be clearly visualized. The map (Fig. 2) does show, however, that the south central areas are of lower elevation, and have more continuous flattish surface than those to the north of the Basin.

[2] Y. T. Chao and T. K. Huang, Geol. of the Tsinling Shan and Szechuan (Geol. Survey, China; Memoirs Ser. A., No. 9, 1931), p. 39.

133 as its branch veins. The distribution of these veins seems, however, to be somewhat unilateral with the heavier concentration of streams in the upper, or northern, half of the leaf (Fig. 7).

The drainage pattern of the Basin possesses some distinctive and readily observable characteristics. One is the close relationship between the direction of flow of the streams and the local geological structures. First of all, most of the streams (particularly those in the areas with the folded structure) flow either at the bottom of a syncline or on top of an anticline, especially if the latter happens to be composed of less resistant formations than those which are present in the surrounding area.[1] Second, when a river transverses the longitudinal axis of resistant anticline ridges, in most cases at right angles, steep gorges are characteristic. This is particularly true in the case of the Yangtse and the Chialing rivers. Third, practically every river in the Basin has a number of terraces lying above the present level of high water. Each of these terraces probably represents a stage when river erosion was quiescent at the particular locality in which the terrace occurs. Rivers were rejuvenated after each of these stages of terrace development and their flood plains channeled to new depths. For instance, beginning from Feng-chieh, at the head of the gorges, following the Yangtse, extend a number of terraces of different magnitudes and heights, ranging from 15 to 50 meters. Particularly these terraces of the 50-meter-high are of great significance in the location of towns and villages.[2] The great city Chungking, as well as the urban centers of Feng-chieh and Yun-yang, for example, are located on these 50-meter-high river terraces. Cities of lesser magnitudes like Chung-hsien, Pei-ling, and others are located on the 20-meter-high terraces.

3. Vegetation Forms

137 The Basin is well known for its rich plant life. Vegetation forms peculiar to all climates, ranging from tropical palms to sub-polar firs, flourish in close juxtaposition and in great profusion. Generally speaking, however, there are three major

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[1] Chao, op. cit., p. 26.

[2] W. H. Wong, "Notes on a Journey to Szechuan," Chinese Geographical Magazine, XIX, No. 4 (1931), 9.

show but little evidence of podsolization.[1] A typical profile of this soil is shown below (Fig. 26).[2] These soils are used principally for rice production and some other crops, such as wheat, tobacco, and various kinds of vegetables. It is necessary to emphasize again the extreme fertility of these soils and the significant part they have played in the agricultural success of the Basin. 134

Besides the rice paddy soils, on the low hills and high river terraces of part of western Szechuan Basin, particularly in the vicinity north of Chengtu, there are small patches of dark grayish brown coarse soils. Many soil scientists prefer to call these soils "Chengtu Clay."[3] Some people believe these "Chengtu clays" were probably true loesses at one time but have lost their columnar structure and are now characterized by primatic and cloddy structure.[4]

c) Podzolized old yellow earth.--Third, the gray-brown yellow soils occupying the surrounding hills of the Basin are generally less fertile and are agriculturally unimportant.

d) Other soils.--On account of the unique geological structure and rock formations of the Basin, one peculiar form of soil erosion has been extensively developed here. With the alternating beds of purple sandstones and shales which have been recently folded and deeply eroded, and in places where the surface slopes of such smooth rock formations correspond to the slopes of hills, soil creep is easily induced. Many times the thin surface soils have been completely removed, leaving only bare rocks. In the case of shales, on account of their comparatively rugged surface, the situation is less grave. Soil creep constitutes one of the most serious problems of agricultural land-use in the Basin, and challenges immediate attention.

3. Agricultural Land-Use and Topography

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With the exception of Chengtu Plain and some other minor comparatively broad river valleys (such as the To and Fou River

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[1] Ibid., p. 121. [2] Ibid., p. 391. [3] Ibid., p. 387.

[4] J. Thorp and D. Dye, "The Chengtu Clays, Deposits of Possible Loessal Origin in Western and Northwestern Szechuan Basin," Bul. of the Geol. Soc. of China, X, No. 2 (1936), 225-46.

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311
valleys) most of the agricultural lands of the Basin are found on the terraced fields of the innumerable small undulating rolling hills which are found everywhere in the Basin.

In the many small valleys there is generally very little bottom land along the courses of the streams. These streams, as a rule, have deep channels and abrupt banks of sandstones and gravel-conglomerate. But, wherever such bottom lands exist at all, they are extremely fertile. They are, in most cases, terraced for rice culture, provided water can be secured. It is not unusual to observe that tracts after tracts of rice and other crop fields have been terraced along the steep banks of these small valleys.

Generally speaking, the agricultural fields, according to the popular classification commonly used by local peasants, consist of four principal categories, namely, (1) Pa Tien, or plain fields, i.e., fields around the smooth level, flattish fields or broad river bottoms; (2) Kou Tien, or valley fields, within narrow river valleys; (3) Ti Tien, or ladder fields, i.e., terraced fields along hills or any other steep lands; and (4) Shan Tu, or hilly "earth," i.e., detached fragmentary lots on hills or mountains which are too rugged and too difficult for terracing and for cultivation purposes. The relative value of these four classes of land, of course, decreases in the order named. It is particularly interesting to note that the first three categories are real "fields" whereas the fourth is merely "tu" or "earth."

Fields devoted to categories (1) and (2), and some portions of category (3) are in most cases used for wet crops (rice) whereas large portions of categories (3) and (4) are confined to dry (unirrigated) crops. The difference between these two types of land, both in the manner of utilization and in their relative value, is as sharp as the difference between pasture land and farm land in western agriculture.

In short, here in the Basin the topography furnishes one of the dominating forces in shaping many of its geographic patterns. First of all, it practically dictates the whole climatic regime of the region, which, in turn, affects the soil conditions. And all three operate in combination to account for the present patterns of agricultural land-use.

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roughly divided into five principal agricultural areas (Fig. 24), namely, (1) the general grain farming area of Chengtu Plain; (2) the specialized "commercial" agricultural area of lower To-Fou valleys; (3) the self-sufficient subsistent agricultural area of the northern Basin; (4) the combined agricultural and forestry area of the eastern Basin; and (5) the mixed farming area of the southwestern Basin.

1. The General Grain Farming Area of Chengtu Plain

Among all the five agricultural areas of the Basin, the general grain farming area of the Chengtu Plain is by far the most important. Here the principal crops are rice and wheat, supplemented by rape seed and tobacco.

As the heart is to the human body, Chengtu Plain is to Szechuan Basin. Chengtu Plain is one of the richest, most fertile, and best known geographic regions of all China. With its mild climate, level topography, fertile and self-renewing soil, the ingenious ancient irrigation systems, and the diversity of agricultural products, Chengtu Plain is destined to be not only the granary of the Basin but also the par excellence "Eden of the Flowery Republic." Strictly speaking, Chengtu Plain is a highly fertile level oasis within a huge "mountain-desert."

a) Name and location of the Plain.--Geographically, the term "Chengtu Plain," by which this region is now known, is not accurate, and is, in fact, somewhat misleading. Chengtu, the capital and the wealthiest city of the whole Basin, from which the Plain now derives its name, is, in fact, an "effect" or a "result," but not a "cause." Strictly speaking, the "Plain" might be more correct, or even more appropriate geographically, to assume the name, "the Min River Plain." It is the presence of the mighty Min, with its incessant life-promoting water-supply and the rich alluvial deposits it brings down, that made the prosperity of the city of Chengtu and of the whole Plain possible. It is interesting to note that unlike historic events, geographic names do not always follow the law of "cause and effect." The river made the plain, and the plain made the city, but now the plain takes its name from the city. 133●

Chengtu Plain is situated at the northwest corner of Szechuan Basin. It is formed by a complex of piedmont alluvial fans built by the deposits of the Min River. Physiographically, 133 it is a clear-cut geographic sub-region within the clear-cut geographic region of Szechuan Basin. Like the latter, Chengtu Plain is practically surrounded by mountains (Fig. 2). To the north and northwest, the Plain is bounded by the lofty Chiu Ting Range, which, on clear days, looks like a high wall in front of the Plain. To the east and southeast, the Plain is bounded by the famous Lung Chuen-I anticlines, a low and uniform range (Fig. 2).

b) Layout and extent.--In rough outline, the Plain is in the shape of a somewhat long and narrow triangle.[1] Its longest dimension, from Chiang-ko in the south to Hsao-shui-ho, beyond Mienchu Hsien, in the north, is about 120 kilometers. Its widest dimension, from Chao-chia-tu in the east to Kuan-hsien in the west, lying almost in a straight line, is about 85 kilometers (Fig. 7). From Tsung-Nai in the extreme southwest to Te-yang-hsien in the northeast, the distance is about 115 kilometers (Fig. 7). The circumferential boundaries are very irregular. The total area is about 6,000 square kilometers. Chengtu, the provincial capital, and fourteen other walled cities, are situated in this Plain, together with many unwalled towns of large size. Farmhouses dot the Plain in every direction.

Chengtu Plain is genetically an alluvial delta, built up by deposits from the Min River, but structurally it assumes a basin-like shape surrounded by mountains. This fact is indicated by the direction of the flow of the Min River. The Plain has an elevation ranging from 1,500 feet above sea level in the south and east, to 2,100 feet in the west and northwest. Its average elevation is estimated to be 1800 feet above the sea.[2]

c) Geological deposits and soils.--Geologically, the Plain is of very recent origin. The alluvial deposits (Fig. 29) of the Plain are seldom over 60 meters deep, below which depths are found the famous conglomerate formations of the Basin.[3] At Pen-hsien and in many other places it is reported that the surface deposits are only 12 meters in depth. But in Chengtu district the alluvial deposits are generally about 5 to 7 meters deep.[1] It is estimated by some geologists that the rate of the alluvial deposition in Chengtu Plain is at the rate of one foot per century.[2] This assertion and calculation is independently evidenced by recent archaeological excavations near the vicinity of Chengtu. Burial objects of unmistakably Early Han dynasty were discovered at a depth of about seven meters (or about 21 feet).[3] In other words, the geological time of these deposits corresponds fairly closely with the historical times as manifested in the age of the buried Han objects, i.e., both are about 2,100 years old. If both of these assertions are correct, i.e., the deposition at the rate of one foot per hundred years, and the maximum deposit being not over 60 meters (or 180 feet) deep, the age of this celebrated rich Chengtu Plain can be no more than 20,000 years. 133

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[1] See Figure 37.

[2] Chao and Huang, Geology of the Tsinling Shan and Szechuan (Geological Survey, China; Memoirs Ser. A., No. 9, 1931), p. 18.

[3] G. Barbour, Physiographic History of the Yangtse (China Geological Society; Geological Memoirs Ser. A., No. 14, 1935); and Chao, "Geological Notes on Szechuan," Bulletin Geological Society (China), VIII, 143.

It is interesting to note that as late as the Han dynasty, large parts of the Chengtu Plain were still swampy in nature. This is evidenced by the fact that the most prosperous settlements at that time were not in Chengtu and its surrounding cities, but rather at Ling Tsung (the present Tsung Nai) and the more elevated hilly areas of the Plain.[4]

In addition to the rich, young alluvial deposits, Cheng-tu Plain is further favored, as we shall see later, by the excellent and ingenious irrigation systems, devised by the revered Li Ping and his son about 2,200 years ago. These irrigation systems freed this Plain once and for all from the danger of drought and flood. Here, multitudes of canals and ditches, filled with irrigation water, run through the rice paddy, fields, vegetable tracts, and flower gardens. Through some ingenious devices, as we shall see later, silts are dug off and the principal channels cleared once every year.

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The Plain has the further advantage of being watered by streams rising in the mountains where the rainfall is much heavier than that in the Plains, and where the water-supply from snow

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[1] Ibid., p. 38.

[2] D. S. Dye, Journal of West China Border Research, IV (1931), 104.

[3] C. T. Shan, "Archaeological Report on the Excavations of Chengtu Plain Areas," Cultural Research Monograph (University of Nanking, 1939). (Unpublished manuscript.)

[4] Hua Yang Kuo Chih, Chuan 2, p. 15.

311 133 melting during the summer is reliable. At Kuan-hsien, where the torrent of the Min first enters the Plain and is taken under human control, the waters are divided into several large canals, each of which is subdivided in turn into innumerable smaller canals and ditches. The life-giving waters are impounded by dams, stone revetments, and other devices, and are held for irrigation purposes. The irrigation of the Plain has another advantage in that the soils are seldom troubled by salt and fine mud which ofter clog irrigated soils in other areas; because the considerable rainfall in Chengtu Plain, with an annual average of about 900 millimeters, is sufficient to prevent such clogging.

134 The soils of Chengtu Plain consist principally of the dark and dark-gray paddy soils. They are formed mainly from alluvial deposits brought down from the rich black soil (chernozem) of the Tibetan border-land and Kokonor (Fig. 9) by the mighty Min River. The natural richness of these soils is enhanced even further by the annual renewal. Because of this fact, soils of the Plain, unlike the paddy soils of many other parts of China, are not strongly podzolized.[1] However, the soil conditions do not appear to be uniform throughout the whole Plain. In fact, there are considerable differences in texture, color, and profile according to slight differences in local relief.[2] For instance, in the upper Min River region, as in Kuan-hsien, the soil texture is much coarser than in the lower Plain areas.[3]

One of the most interesting practices in connection with soil culture in the farms of Chengtu Plain, is the building of little stone wing dams or projections along the stream banks out into the water. Behind these projections, the streams, in the course of a back eddy, deposit silt and sand, which are frequently rich, particularly in organic matters. All these mud accumulations are carefully dug out and carried in baskets to the fields. Many times muddy waters have been led into basins or rice paddies in order that fine fertile silt might be precipitated on the fields.

241 433 d) Agricultural products of Chengtu Plain.--The Plain is noted for its diversity of agricultural products. It produces

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[1] Thorp, op. cit., p. 391.

[2] Ibid., p. 387.

[3] Ibid.

5. The Mixed Farming Area of the Southwestern Basin

Among all the principal agricultural regions of the Basin, 241 the mixed farming area of the southwestern Basin (Fig. 24) is the 135 most interesting. Here lies an area like a synthesis of all the above four areas. Besides its own unique quality, as we shall see shortly, this area possesses some characteristics of each and every one of the above four agricultural areas. This condition is true in topography, soil, crop association, and other aspects.

In topography, for instance, this area possesses some of 133 the anticlinal ridges (but lesser in magnitude) like the eastern Basin; some irregular hills like the northern Basin; and some broad plains (in smaller extensions) like the Chengtu Plain, or rather, like the lower To-Fou valleys. However, unlike all the above four agricultural areas, the absolute relief here is, on the whole, the lowest, averaging about 300 meters above sea level.

In soil, this area is also a miniature model of the above 134 four agricultural areas. The usual purple-brown soils of the northern Basin, the limestone soils (old and young yellow earths) of the eastern Basin, and the rich alluvial soils of the Chengtu Plain and To-Fou valleys are all present here (Fig. 9).

In agricultural land-use and crop association this area 241 has the greatest variety of products. The broad river valleys of 311 the Min (lower) and Yangtse furnish fertile fields for rice, suger-cane, and orange groves. The more hilly lands, terraced in minute steps, are used for corn, wheat, rape, hemp, barley, potato, beans, and other crops. Unlike the other four areas, corn is the most predominant crop here. Moreover, on the steep slopes of the high anticlines, or on other more hilly areas, numerous forestry products, such as tung tree, tea, white wax, mulberry trees, and various kinds of bamboo, are found. Especially, the bamboo products and white wax are the most famous.

Above all, another interesting feature of this area is the bona fide tropical character of its agricultural and horticultural products here. Climatically, with the exception of the southeastern highlands of the Basin, this area is the warmest among all the agricultural areas of the Basin (Fig. 24). Such well known tropical products as Li Chi, Lun yen, bananas, and palm vegetation are found here.

Another special feature of this area is the difference 312 in its water use. Like Chengtu Plain this area is endowed with

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Hu, and the Ying-hsing Hu.[11]

6. The Hsi-k'ang Tibetan Plateau Lands

While Hsi-k'ang is somewhat peripheral to our present study, the close relationship to western Ssu-ch'uan and northern Yun-nan of eastern Tibet or Kam (Hsi-k'ang means "Western Kam") makes it desirable to examine its geographical situation. In any event the valleys of the Ya-lung Chiang, the An-ning Ho, and the Ta-tu Ho with its tributaries the Ta-chin Ch'uan (Great Gold River) and Hsiao Chin Ch'uan (Little Gold River) have figured since ancient times in Chinese history, and Lhasa has never had any real claim to the high plateau country east of the Chin-sha Chiang. The boundary between Tibet and China settled by the Manchu Emperor and the Tibetans in 1727 and lasting down to 1910 ran from the Mekong just north of A-t'un-tzu, crossed northward into the Chin-sha Chiang valley and followed the water divide between the Chin-sha and the upper Mekong sources to the Kokonor Territory.[12]

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Photo 4. Shuang-chiang, Yun-nan Province (23° 29' N, 99° 50' E)

In this panorama, the viewer looks northwestward along the ridge of the Pang-ma Shan, the highest point of which culminates at the 10,608 feet high Liang Shan in the left center background. The large forest remnant in the foreground is on the southern end of the Pang-ma Shan just northwest of Shuang-chiang town. Here is dramatically contrasted the dense forest vegetation that once covered all of South China with the denuded slopes that comprise the large percentage of South China mountainland today. The slash-burn, shifting cultivators that comprise the mountain tribes are largely responsible for this situation, although ultimately the cause is attributable to the pressure of the Han-Chinese who have crowded out the mountain tribes and prevented natural regrowth to take place. While the mountain tribes prefer their cool heights, the Pa-yi basin dwellers are found usually only in the low, hot valleys such as that at the right of the photo where the low fields may be flooded for wet-rice cultivation.

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132 mometer in the 40's and 50's, with frequent light but pro-
S longed drizzling rains that create chilly, uncomfortable
[241] sensible temperatures. Almost year-round plant cultiva-
tion occurs in most of the Basin, so that Ling-nan and Ssu-ch'uan have much in common. In the plateau lands of Kuei-chou, Yun-nan and Hsi-k'ang, a different situation prevails. Some of the basin-lands of Kuei-chou share the high humidity and other climatic characteristics of Ssu-ch'uan, but the mountain lands and slopes are cool moist areas with rather poor soils, frequently shrouded in fog.

The Yun-nan Plateau, on the other hand, emerges above the winter mantle of cloud that covers Ssu-ch'uan and has a delightful winter climate like that of North China in late spring. The high altitude of over 6500 feet makes for mild sunshiney winters and cool summers in spite of fairly high rainfall and the low latitudes. At Ho-k'ou where the Yuan or Red River runs out of the provinte into Viet-nam, the rainfall averages 48 inches annually. At T'eng-ch'ung (T'eng-yueh) near the Bhamo frontier of Burma, the rainfall rises to 58 inches per year. In the central lake basin area as exemplified by K'un-ming, the rainfall is reduced to 40 inches, decreasing northwestward with the increasing altitudes and increasing distances from the seas. At Li-chiang near the Hsi-k'ang border, the rainfall drops to 26 inches annually.[14]

While the plateau heights provide a pleasant and invigorating climate, there is a sudden change in the lower altitudes of the deep ravines and basin lands under 4300

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● 133 Photo 5. Lu-ku Lake, Hsi-k'ang Province (27°43' N, 100°
48' E)
631 At Lu-ku Lake in the center background, the viewer
162 sees the picture of the eroded surface of the eastern part
of the Tibetan High Plateau. Known as Cham, this part of the high plateau was constituted the province of Hsi-k'ang by the Manchu Government in 1906. It is inhabited by East Tibetan peoples such as the Fan, Nakhi and Ku-tsung. Han-Chinese settlers find the land inhospitable for their culture, since the elevations even in the lower parts seen in this photo are between 10,000-15,000 feet. The still relatively level surfaces of the plateau in the foreground are deeply gashed by the snow-flanked ravines. On the central one are cultivated fields of Tibetan tribes.

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175 prising this area. The famous engineer, Li Ping, was sent to administer Shu as governor, and it was at this time that Li Ping and his son developed the Kuan Hsien irrigation system still operating today.[5]

According to Hsu, the fact that the Chuang people of present-day Ssu-ch'uan, Yun-nan, Kuei-chou, and Kuang-hsi still sacrifice to the two irrigation deities gives added proof that the Southwestern Yi of Han times included the Pa and Shu peoples in their group. The indigenous Chuang of the provinces of Kuang-tung and Kuang-hsi do not honor these deities, however, and this would indicate that their migration there must have occurred prior to the end of the Chou Dynasty and the Warring States Period. It also points to the far-reaching spread of Shu-shan culture, while other cultural ties indicate that the indigenous Chuang of Ling-nan are of the same stock as those of Pa and Shu.

* * *

Photo 6. Lu Hsien, Ssu-ch'uan Province (28°54' N, 105° 27' E)

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When the Chin-sha Chiang runs out of Yun-nan to become the Yang-tzu River, it enters a great basin that once contained a vast inland sea in what is now Ssu-ch'uan Province. With long erosion considerable unevenness has developed that makes the local sandstone topography precipitous but without great elevation differences. From the air the eroded sea-bed aspect can be perceived without much imagination, an aspect that is supported by the meandering character of the streams. This is seen not only in the great bends of the mighty Yang-tzu, but also in the small tributary between two of the Yang-tzu bends. A surprisingly large proportion of the basin surface, therefore, is under cultivation to support in Ssu-ch'uan the largest provincial population in China. From dry-cropped flat-topped lake-bottom remnants standing along the sky-line, tiered paddy fields lead step-like down to the river floodplains. In B.C. times, this was part of the prosperous T'ai kingdom of Shu. The foreground shows the important Han-Chinese city of Lu Hsien where the road from Ch'ung-ch'ing to K'un-ming crosses the Yang-tzu. This was one of the last territories yielded up by the southward moving early T'ai migrants en route to the Kuei-chou and Yun-nan basin lands.

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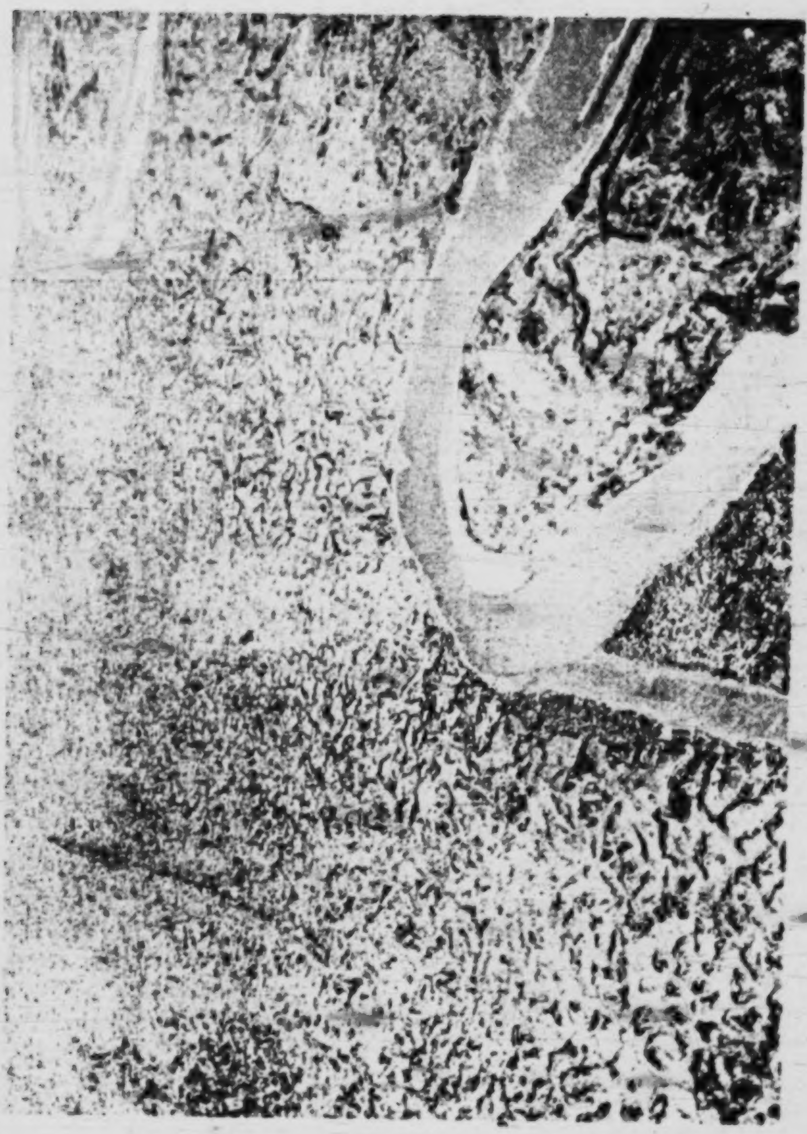

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Ch'uan otherwise known as General Fu Yu-te, as the "South-Pacifying General.". He was instructed to lead an army to conquer Yun-nan which had reverted to the independent rule of local chieftains after the collapse of the Mongol Dynasty. General Fu Yu-te commanded an army of 100,000 which assembled in Hu-kuang Province (Hu-pei and Hu-nan area). Aside from a part of his army which he dispatched post-haste to Wu-san (present-day Wei-ning in western Kuei-chou)(See Photos 7 and 8), he personally led the main body. He entered Kuei-chou from Hu-nan along the Yuan River route. It is readily understandable that with Fu Yu-te's large army burdening the area, many Miao would feel compelled to migrate southward. And when the north Kuang-hsi Miao of today are asked at what period they migrated there, they invariably reply with the two characters Hung-wu for the first Ming Emperor's name, showing that they migrated there at the end of the 14th Century.

A few Miao are found scattered among the Li tribes of Hai-nan Island. During the reign of Chia-ch'ing (1522-1567), there was a major suppression campaign against the Li tribes of Hai-nan. At this time, Kuang-hsi Miao

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Photo 7. Wei-ning district, Kuei-chou Province (26° 52' N, 104° 17' E)

North of the town of Wei-ning and the Ts'ao Hu shown in Photo 6, the characteristic plateau forms of northwest Kuei-chou reveal a topography that in the large appears relatively even except where mountain systems such as the Miao Ling at the upper left of photo span the surface. The rugged parts of the non-mountainous terrain are found where great canyons and deep, narrow valleys such as the one in the foreground have been eroded far below the surface of the plateau. The middle terrain is pock-marked with an almost straight line of sink-holes testifying to easily soluble underlying limestone rock that often is found in Kuei-chou. Lolo and Miao slope-farmers cultivate the hilly land in the foreground, and terrace ridges run down the inter-locking ridges of the great canyon. Many terraces appear to be abandoned. The slope soils are poor, acidic yellow earths from which fertility goes quickly with crop cultivation.

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P and southwest China. In the eastern part of Hsi-k'ang
167 the valley of the An-ning Ho, a tributary of the Ya-lung
133 Chiang just before the latter joins the Chin-sha (Upper
487 Yang-tzu) River, early became an important military
175 route for southward-reaching conquerors. This route
S not only is fashioned for north-south travel, but provides
166 a large rice basin where the present capital city, Hsi-
133 ch'ang is located. It is doubtful that this was ever occu-
487 pied by T'ai people, for this is in the midst of the Lolo
175 country.

Undoubtedly the Kuei-chou plateau and mountain land played an important role in the separate development of the two principal directions of the T'ai thrust, that is, the thrust up the Yang-tzu into the Yun-nan lake basins, and the thrust southward into Ling-nan and the land of Nan-Yueh, present-day Kuang-tung and Kuang-hsi. These two regions have had significant early T'ai political organizations and they are still important centers of the T'ai remnants within China. Their historical development differed. Ling-nan was in the direct path of the Ch'in thrust for empire, and the T'ai had been here for many centuries before the Ch'in. Yun-nan, on the other hand, was probably entered by the T'ai only shortly before the Ch'in unified the

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Photo 8. Ts'ao Hu, Kuei-chou Province (26° 52' N, 104° 17' E)

Sw Ts'ao Hu in central Kuei-chou Province is one of the
● 133 two lakes of a significant size in Kuei-chou, the other
311 being in southwestern Kuei-chou near the Kuang-hsi
175 border. This lake basin lies along one of the most important routes connecting Ssu-ch'uan Province with Yunnan Province. It contains one of the few relatively large paddy areas in Kuei-chou and was early a Han-Chinese administrative center and military base for the conquest and control of the Miao and Lolo tribes of the province. The far left shore of Ts'ao Hu seen here from the west is the site of Wei-ning, the district seat and one of the larger towns of the province. Prior to Han-Chinese entry to this part of China, rice-farming T'ai tribes occupied the basin, while Lolo tribes farmed the surrounding mountains. With the increasing southwestward push of the Han-Chinese, the T'ai tribes migrated farther toward the southwest frontiers.

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enfeoffing him King of Yun-nan with the rank of T'e-chin, the title Duke of Yueh State and Prefect-creating General. Moreover, the Emperor bestowed a new name, Kuei-yi (Convert to Righteousness) upon P'i-lo-ko. The son of P'i-lo-ko was enfeoffed General of the Right Command, General of the Left Body-guard, Expectant of the T'e-chin Rank, General of Cavalry and, to top it all, the Emperor gave him the title: Pillar of State. Emperor Hsuan Tsung after A.D. 742 received P'i-lo-ko's grandson Feng-chia-yi in audience, conferred on him the title Hung-lu-ch'ing (rank given travelers of high status), and gave him an

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Photo 9. Ta-li, Yun-nan Province (25°42' N, 100°9' E

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Erh Hai (Ear Lake), 7000 feet in elevation, and the plain of Ta-li in western Yun-nan is viewed here from above the 14,000 feet high Ch'ien-ts'ang Shan west of the lake. Ta-li City, visible as the rectangular walled patch in the center of the lake plain, is the western rival of K'un-ming, capital of Yun-nan Province. The plain is about 30 miles long and 3-4 miles wide. Narrow passages at the north and south ends are strategically bounded by the towering Ch'ien-ts'ang and the lake edge, the southern entrance being through a canyon and across the bridge over the lake outlet. Early T'ai chieftains built their kingdom of Nan-chao upon this base and expanded the state to encompass most of the Yun-nan and Kuei-chou plateau lands. The state withstood Han-Chinese conquest for nine centuries, but was brought to its end by the Mongol armies of Kublai Khan.

The population of the Ta-li Plain for the most part are the Min-chia tribes who have successfully maintained their hold against displacement by the Han-Chinese. Highly Sinicized themselves, the Min-chia are being rapidly absorbed into the mainstream of the Han-Chinese culture. A small number among them have been converted to Mohammedanism, but most of them are Buddhists.

The Burma Road passes the southern approach to Erh Hai where the fortress town of Hsia-kuan guards the plain. From the northern end a motor road runs to Li-chiang between the great loop of the Chin-sha Chiang. The Ta-li Plain thus occupies a very strategic position in the communications of western Yun-nan.

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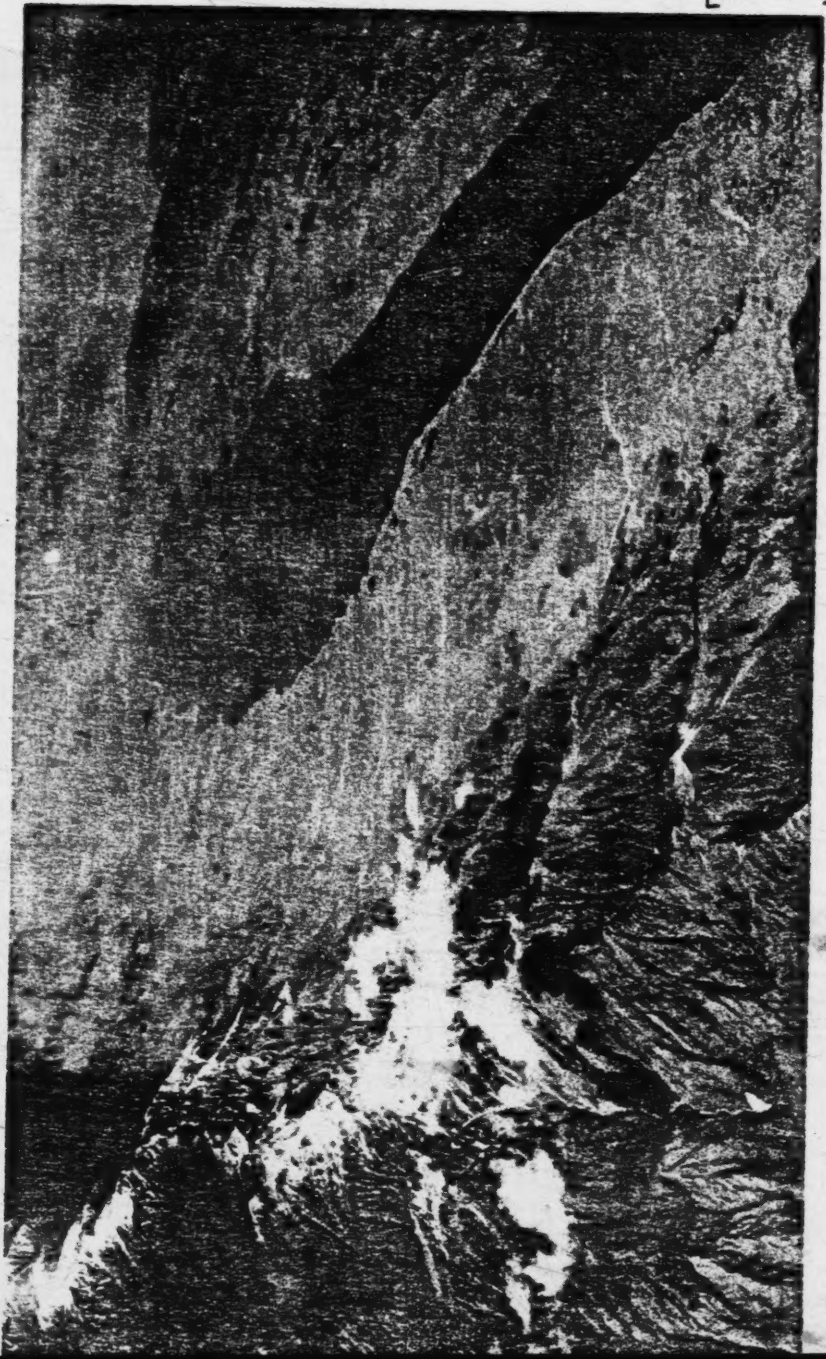

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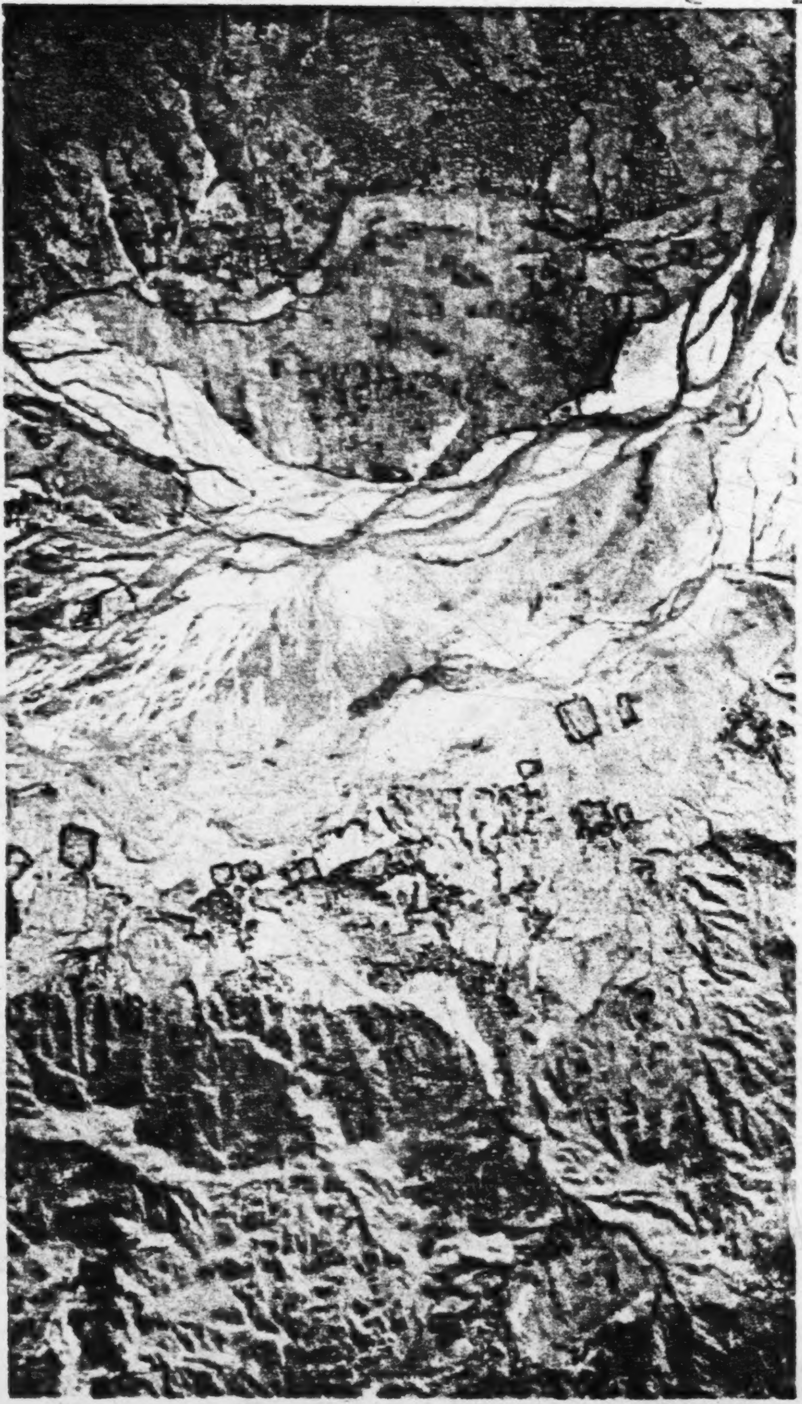

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Miao

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districts, there also are some Blue Miao in the districts of Ching Hsien, T'ung-tao, Sui-ning and Ch'eng-pu. A large part of northwest Hu-nan, however, in 1951 constituted the Communist West Hu-nan Miao autonomous region (See Map 31). In Lu-chi and Kan-ch'eng districts there also are some Ch'i-lao tribes. The Miao in Kuang-hsi are mostly found in the borderland region where Kuang-hsi meets Hu-nan, Kuei-chou and Yun-nan. They are found in sixteen districts: Ling-yun, Pai-ssu, Tung-kuang, Ssu-lung, Nan-tan, Ho-ch'ih, Tu-an, Ssu-en, Yi-pei, Lo-ch'eng, Jung Hsien, San-chiang, Lung-sheng, Hsi-lung, Hsi-lien, and Chen-pien.[34]

Most of the Kuang-hsi Miao have migrated there in modern times, those on the Kuang-hsi Yun-nan borders most recently. While there are many varieties, mostly they are White, Flowery and Black Miao. Miao also have migrated into Ssu-ch'uan near the Kuei-chou border. In southeastern Ssu-ch'uan where Hu-nan and Kuei-chou meet it, the Red Miao inhabit the districts of Yu-yang and Hsiu-shan, White and Flowery Miao are found in the districts of Kao Hsien, Kung Hsien, Hsing-wen, Chang-ning, and Yun-lien. The White Miao outnumber the Flowery Miao, so this is called the White Miao habitat. A few

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Photo 12. Lo-tien, Kuei-chou Province (25°25' N, 106°44' E)

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Kuei-chou and the western parts of Kuang-hsi Provinces are well eroded plateaus whose sandstone formations are run through by limestone rock belts here shown in striking contrast to the sandstone in the foreground. The limestone belt is darker owing to its heavier cover of vegetation, which in turn reflects the greater sterility and droughtiness of the limestone surface for agricultural crops. Caverns, disappearing and reappearing streams are frequent in the limestone region with its characteristic steep-walled formations made famous in Chinese art by Sung Dynasty painters. In contrast to the dwellings and cultivated fields on the broad, sweeping and gentler slopes of the sandstone, the limestone hills appear devoid of cultivation and human habitation. The inhabitants here are probably mostly Chung-chia tribesmen having T'ai afinities. The habitat is not attractive to Han-Chinese farmers who are scarce here.

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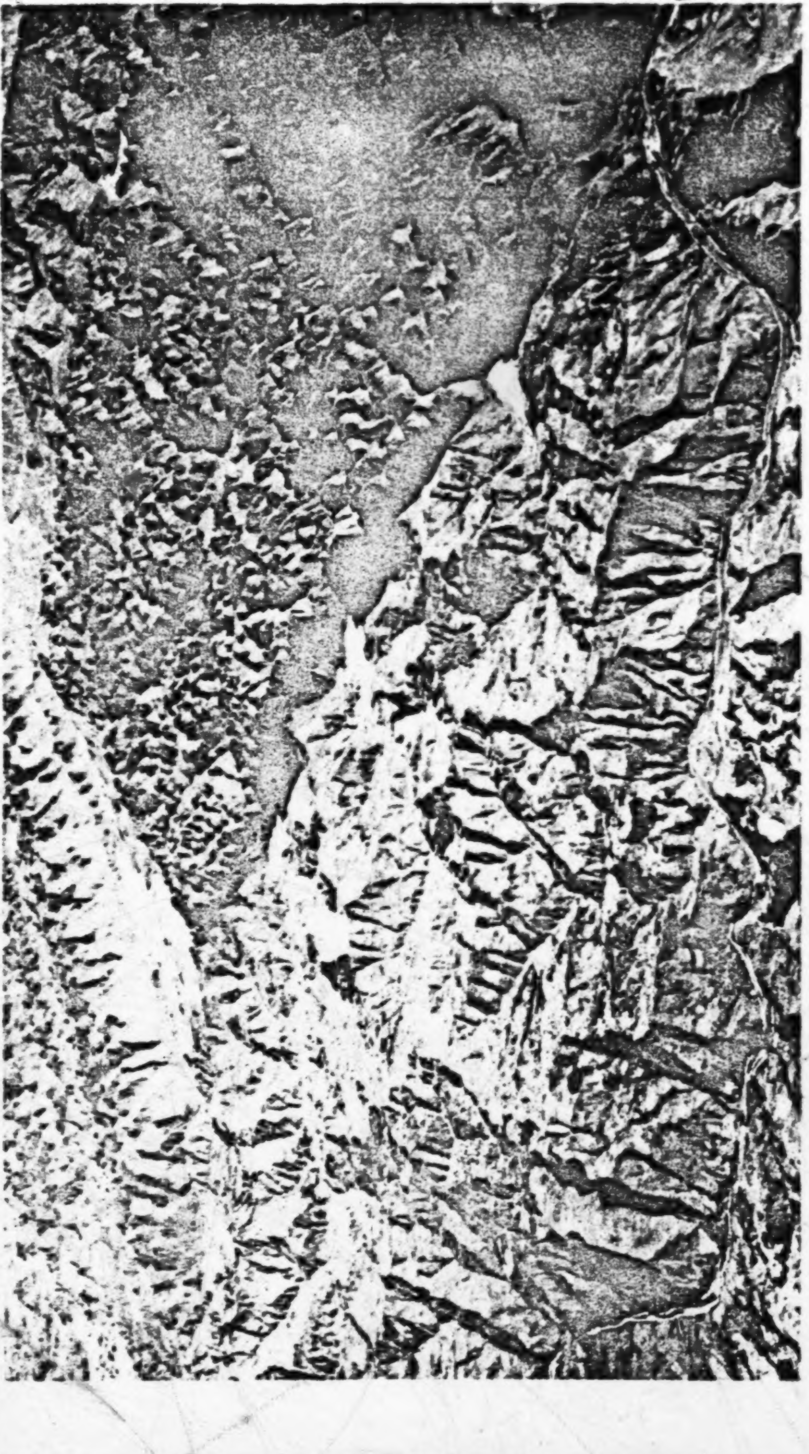

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S twelve "Panna," with some differences from the smaller
636 t'u-ssu domains mentioned on the previous page. Only
634 four are found in both lists, Liu-shun, Meng-lung, Meng-che,
Sh and Meng-a. The Sip Song Panna was to have formed
631 part of the buffer state proposed in discussions by the
648 French and British in 1895 but this was found impracticable,
so that the last hope of an independent T'ai state
here failed to materialize.[76]

Of the twelve subordinate states listed by Carey, Wu-tei
and Meng-wu were annexed to French Indo-China. The
chief towns of these two were Muang-u-nua and Muang-u-tai
respectively, situated on the Nam U, a river which
Sh joins the Mekong just above Luang Prabang. Said Carey,
669 in 1899, "The history of the 'Sip Song Panna' seems to
have been a series of disputes about the succession; and
desultory fighting for the supremacy was kept up for years,
and until quite recently*** between rival chieftains."[77]

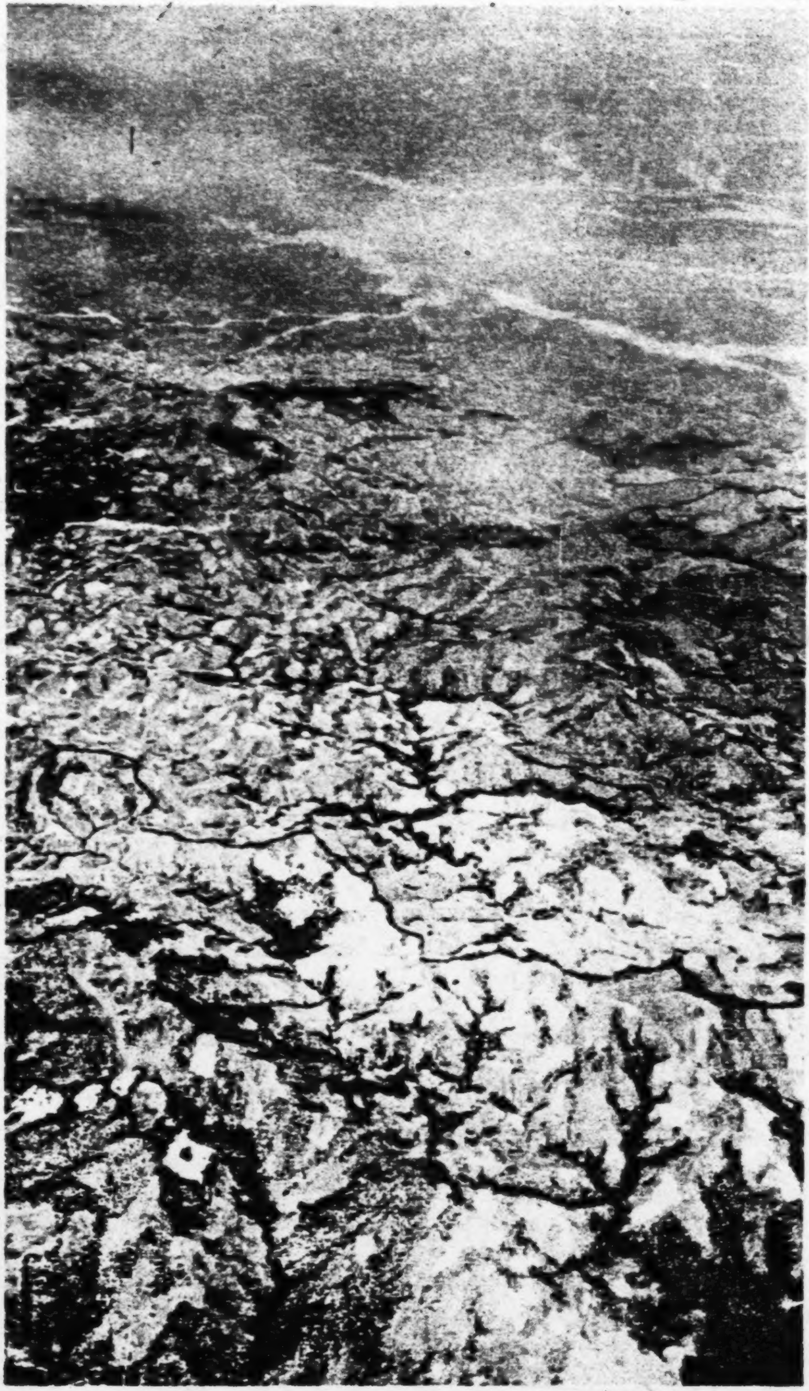
Photo 14. Ching-kang, Yun-nan Province (21°46' N, 100° 14' E)

Sw In this view are seen the mountain lands and basins
●133 of the southwestern Yun-nan frontier adjacent to Burma.
636 The northward-looking view is from approximately above
241 Ching-kang village, with the elongated river basins of Fu-hai
563 (Meng-hai) in the middle distance. This area constitutes
Sh part of the recently established T'ai Autonomous
631 Region organized by the Chinese Communists. Fu-hai has
241 been a Han-Chinese administrative seat in southwest Yunnan
for about two decades and together with Ch'e-li formed
the southernmost Chinese district seats in Yun-nan. The
river basin is well settled by the wet-rice farming T'ai
tribes, while slope farming mountain tribesmen, whose
farms are seen in the white patches in the foreground,
periodically shift their fields in a migratory system of
agriculture, burning forests and brush for new fields as
Sw old farms become exhausted. Several states in the cycle
721 of cultivation and abandonment are visible in this photo.
648 It was into the Burmese Shan areas west of this region
that the last remnants of the Nationalist armies under
General Li Mi fled when the Communists overran China
in 1949. Pocketed in such terrain as seen here, aided
by local tribesmen, this force successfully withstood Burmese
attacks for several years.

2: Wiens G-4 (no date) 1954 AF17 South China

Southwest China AF16

Shaw-Thai AL3 [p. 313]



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AJ1
Doba
S.W. China AF16

On April 4 we went over the pass of Chima t'ang, across a plateau of 4,265 meters which one reaches by a gradual ascent over a moraine covered with naka and between gigantic erratic boulders of granite (Plate XXXII). At my right (toward the south) I had a jagged mountain chain, for the most part hidden behind whirling clouds of snow and hail, and visible only for seconds at a time. It had isolated mounds and peaks that were 700-800 meters higher than the pass. At the left (toward the north) there were long mountain ridges with pastures which reminded me of the monotonous chains of peaks and the greenish-gray sandstone and slate of the Ngolok lands and the green chaos of hills along the Ma Chu. C 133

The Chima t'ang region is regarded as the worst for robbers between Dscherku ndo and Hor Gantse, for the uninhabited wilderness is the favorite place for lurking Ling gose, Li tang, and Ngolok bandits. They attack the traveler and rob him to their hearts' content, down to his shirt. On April 3, therefore, a large company of merchants from Horba and Schensi had joined me near Dschadschi gomba. They had been waiting there for reinforcement. All of them were armed to the teeth and well mounted. They also had two oxen which - as the Chinese agent Wang da later revealed to me - carried two bags full of musk and gold dust worth 14,000 marks. (3) T 674

> 3. After a preliminary pass and behind the actual Chima t'ang there is a descent of a few hundred meters east-southeast into a valley in which a few dozen tents and yak herds were to be seen. From my companions I learned that they belonged to genuine Ngolok from the Hantsien Doba tribe who have rented this region from the Ling gose. It was people of this same Doba tribe who /171/ prevented us from sleeping on the night of September 14-15, 1904 on the banks of the Hwang Ho, and did not go home until they had lost their leader. The families who were settled here had separated from the main tribe on account of some difference of opinion. They had their own state and had no intention of being absorbed into the Ling gose tribe. T 361

/171/ On a second pass that was hardly lower than the first, I was caught by a violent snowstorm in the afternoon. It exhausted the animals to such an extent that I was forced to untie their packs in the midst of the storm, and to rest. At noon the thermometer stood at -2°, at night it was -6°. Since I no longer had a winter coat, the 000

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Dergi
S.W. China AF16

T 777 braided and around its neck hangs a red or black tassel and a little silvery bell.

C 133 On the southeast side of the Muri La only the upper part of the slope is steep (Plate XXXIII). Six kilometers below the pass lies the Yü lung Ts'o Lake. It is about five kilometers in circumference and was formed by /173/ glaciers which have now disappeared. In this part of Tibet there are no larger lakes to be found. The Yü lung Valley soon becomes a few kilometers wider. On the left there was pasture land. In lateral ravines we occasionally saw small tent villages.

C 137 On the right there were beginnings of forests, spruce and pine of great beauty, that grew up to 4,100 meters altitude, but that always kept to the northern slopes and were not found on the valley bottom.

T 438 On our next few marches we met 400 to 500 yaks carrying tea, and on April 9 we passed as many as 900 yaks. The caravans usually set out very early in the morning and are already making a rest-stop by 10 or even 9 o'clock. It takes five months in this way for a bail of tea to get from Ta tsien lu to Lhasa and thousands of waterways are crossed.

T 792 On April 7 we camped beside Yangtze gomba (Säge gomba) a small monastery of the Nima faith, containing 80 monks. Very near it there is another monastery of this sect and that is set in between tall spruce and limestone rocks. One of the gelong served me butter tea in his cell.

C 137 On April 8 we camped beside a slope on which a forest fire had been raging for days and which had already caused a great deal of damage. It was the largest I saw in Tibet. Several square kilometers of the most beautiful virgin forest had fallen a victim to the elements and was totally destroyed. Every day one sees traces of forest fires but no one pays any attention to the fires. Most of them are caused by careless travelers or native shepherds in the dry winter season. They are practically never fought, but simply left to burn themselves out.

C 133 At noon on April 9 we left the Yülung Chu Valley (Plate XXXI). It extends due southeast for practically 50 kilometers and all the way there is a broad, sumptuous floor of pastures. Then suddenly it became deeper and began turning to the north and northeast whereas the road continued in the old direction, along the furrow to the southeast. In the end the river was 20 paces wide and one meter deep. It was now only 3,575 meters high.

Dergi
S.W. China AF16

C 137 The next campsite lay in a veritable park landscape (Plate XXXV) at 3,800 meters with a very beautiful view of the snow-capped chain of mountains in the south. Unfortunately the alpine flowers were still in hibernation. But the many seed pods and remnants of huge edelweiss, of hundreds of kinds of primroses, of orchids, rhododendron and gentian were evidence of how beautiful and colorful it must be here in June and July.

C 133 On April 10, amid clear sunshine, we crossed another pass, 4,100 meters high, from which there was a sudden and surprising view of the magnificent mountains of Rungwatsun and Amne Rala. The new layer of snow had melted far up, as a result of the sun of the last few days. The dark ridges of primary rock stood out clear and sharp against the sparkling blue of the sky. The steep slopes of the peaks glistened with eternal snows and ice crevices, glacier fragments and seracs, furrowed avalanches, and walls of snow beckoned and called to my alpine heart (Plate XXXVI). But I had to remain below on the almost flat moraine at 4,000 meters and guard the caravan. We set up camp amid the huge masses of moraine that extend many kilometers north of the high chain, and that /174/ have covered with granite boulders the sandstone and limestone that was pushed down from the north centuries ago against the wall of primary rock. On this day the maximum temperature was $+16.5^{\circ}$, and the minimum at night was -4°.

T 792 At noon the next day we rode past a picturesque hermitage, Tschora yunka, that stood on a limestone cliff and was inhabited by 14 nuns, "ani." A loquacious old man told us with much head-shaking about "those crazy women." He said that for five years a beautiful maiden has lived there on the cliff, who turned down the best matrimonial offers because she wanted to spend her time praying and serving God. In her ambition to imitate the male priests, she had forbidden every male creature from coming near her cell.

T 361 At an altitude of 3,700 meters fields begin to appear. The first village lay at 3,600 meters. The main road led straight through it. The houses were all two-storied with flat roofs and were not very close together. W.W. Rockhill came through here in 1889 and from his book I learned that the natives of this region were particularly hostile to strangers, so we rode rather quickly through the first settlement that numbered 25 houses. To the questions "Where from?" and "Where to?" Da Tschang simply replied with some short, every-day lie.

The village lies at the head of a large, wide plain stretching to the east, and is the seat of a community chief. It belongs to the Dergi kingdom. Not far to the south a large brook comes out of a

S.W.China AF16

133 The Da Chu Valley - I also heard it called Tschuwo Chu - extends in a straight line toward the southeast, constantly following the stratification of the sandstone slabs which are again steep here and pressed together vertically. The old road with its countless holes and stone debris continues to keep to the right side of the valley. Like the course of the valley, it aims straight for its goal. Only the muddy stream winds around the peaks that rise up 1,000 meters from the valley and touches sometimes the right, sometimes the left side of the valley. Sometimes it is wedged in between detritus mounds and fragments that a tributary brook thrusts in its way, then again by projecting rock terraces consisting of hard stone slabs, until it becomes /188/ a narrow "valley within a valley." On the valley terraces above the stream there are fields and farms spread out and bushes and hedges
137 separate the individual fields. The flora - in the middle of April everything was still in its winter sleep even here in the south which has a latitude corresponding to that of lower Egypt - was rich, even abundant here at an altitude of 3,500 - 3,300 meters, compared with what I had come across shortly before. There were pastures with thick grass on the southern slopes of the valley, and they reached almost up to the peaks. The northern valley walls, however, were covered with dark spruce forests with wild, tangled underbrush, magnificent hideouts for small and large bush rangers, so that I was glad to know that the Chinese were the real masters here. After the long rides I had taken with my rifle under my arm, I felt as safe as though I were in Abraham's bosom.

579 Deeply cut forest ravines lead off the road toward the south. In all the larger ones there are winding paths leading into the parallel Dsa Chu Valley to the Tschantui. "Two years ago, before our present da ien came to Hor Tschanggu, one could not ride so peaceably along this road," the soldiers told me. "The Tschantui from the south and the Khorgan and Loko from the north made sudden attacks on every caravan carrying goods. Every month there were people killed. But Wu da jen formed his own militia, set up agents and native guards everywhere who announce the approach of all suspicious-looking gangs with fire and smoke signals. Neither the Tschantui nor the Ngolok-Khorgan dare make a sudden attack any more." However, I also learned on another occasion that not a year had passed since the last big attack. At that time 70 mules along with their packs were driven away into the Ngolok country. Not only the Khorgan through whose country I passed in 1904, but also the Ngaba robbers were well known here.

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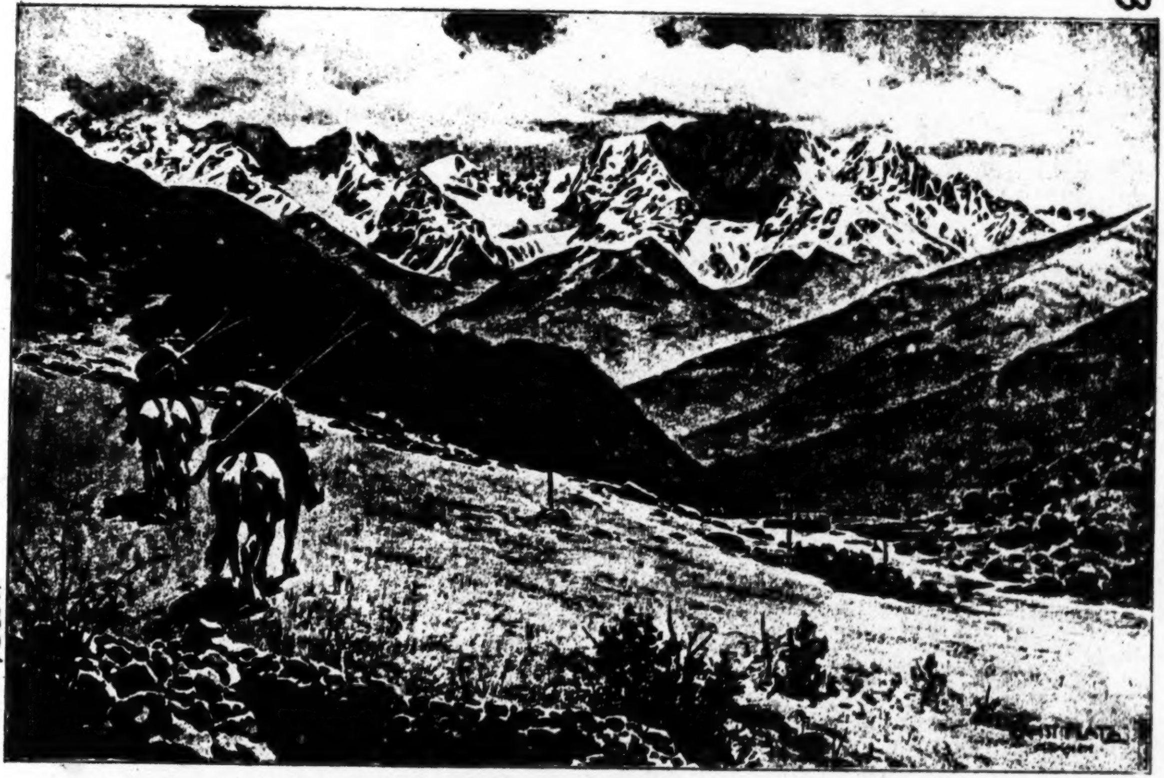
6: Tafel--304 T-3 (1905-1908) 1914 AJ1 Tibet

S.W. China AF16

Plate XLVII.



The sacred Lhamortse. (Seen from the Dschedola.)

II

/192C/

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792 business as their male colleagues whose sanctuary is loaded with glistening gold ornaments and symbols. (2)

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361 2. North of Tschanggu is the opening of the large Niba Valley, and, according to the mandarin, if one travels up it one reaches the community of Loko on the first day, on the second Säko, then Dschema Zakun, Zenyi, Aubanyi, Audschenyi, Ladiao, and Datama. The first three towns are dependent on Ho lu (Hor) Tschanggu and presumably permanent /194/ settlements. The rest consist of nomads. Southeast of Loko is Urko (Chinese: Yü ko Tu se) which extends a day's journey to the north of Dawo. Five days' journey from Tschanggu through the Niba Valley is Waschu Konggan (also called Ngolok-Khorgan) whose chieftain Gado was a very proud man and the chief opponent of the Lu ho tenn mandarins. In 1906 he was furnished with 100 horsemen from Upper Ngaba, all dressed in thick padded silk jackets, so that he could appear more haughtily at a lawsuit against Wu.

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133 On an excursion up the mountains to the southwest of Tschanggu, I went five kilometers (aerial line) where I reached an altitude of 4,820 meters. The mountains bordering on Tschantui are a few hundred meters higher, but they do not have sharply divided forms. A little over 4,000 meters I noticed a terrace, the formation of which I attributed to old glaciers. The rocks of the peaks consisted of granite. Metamorphosed, blackish slate was pressed against these with a stratification of N 55-60° W; but the strata seemed to yield against their will to a more meridional direction. From the peak I could see no higher mountain range to the north and east, but even there the average height of the peaks is not far below that of Mont Blanc. On my walk rhododendron bushes accompanied me almost up to the peak.

/194/ All three settlements lie on an embankment of detritus covered with loess and loam, which came from the southern mountains. Not far from the castle this shifting mass is cut in two by a torrential brook and forms steep detritus slopes which produce a landslide each year. In order to avoid destruction the monks have placed a large Lab rtse above the slope and set up many prayer pennants on top. But it seems that the good earth spirits have still not calmed the raging brook. C 133

C 487 From Tschanggu to the next larger town, Dawo, the Tibetan estimates three to four days' travel, from there to Ta tsien lu ting, to the seat of the first more important Chinese mandarin, six days. I traveled this distance which has since then been traveled by several missionaries and even by the German consul in Tscheng tu fu, in the customary length of time and shall therefore word my account briefly. The road follows the course of the Da Chu southeast as far as Dawo, and even beyond that keeps to this direction. Whereas the river breaks through the mountain chain at the right of it and then joins the Dsa Chu, the road leads over a number of crests, over altitudes of between 4,000 and 4,200 meters and at the Dschedo la joins the second larger thoroughfare of Southeastern Tibet, the Lhasa road, which passes through Li tang and Ba tang.

T 484 In Tschanggu I was given three soldiers to accompany me. They were supposed to get salaries and supplies from Ta tsien lu for Wu. They were joined by two Tibetan aristocrats with some baggage, who were planning to bring a suit before the Ting in Ta tsien lu (Plate XLI). Thus I traveled very comfortably.

T 797 On April 23 we again crossed the Da Chu which had become so large, having been joined by a number of tributary brooks, that, in spite of the seasonal low water, one could only cross in round leather boats (Plate XLIII). On the opposite shore, just as we were putting the bridles on our horses and mules that had been obliged to swim across, a Tibetan who was dressed halfway like a European, marched up to me and behind him a real European soon appeared carrying a large bright sunshade. I had completely forgotten how we Europeans look and was startled by the strangeness of our skin, our tropical helmets, our European, close-fitting suits and snow white ties. But positively frightening /195/ seemed to me our sky-blue eyes. A breath from an entirely different world and from an era that ought not yet to be, suddenly was wafted toward me. Mr. Amundsen, the active member of the Christian Bible Society was about to undertake a large expedition to Dergi. For several years he has devoted his entire strength to filling in the gap in Tibet's medieval culture. Loaded on a large number of yaks he carried voluminous chests containing thousands of editions of the Gospels in the Tibetan language, which he intended to distribute and sell to the inhabitants. At last I heard news about Europe again. But we only talked for five minutes. For five minutes I looked into another world but then our companions urged us on and

T 797 the leather bowl carrying the Rev. Amundsen pushed off from land. Again I saw only unwashed, broad-nosed, bronze faces and fantastically bright-colored clothes, all of which had before seemed so natural to me. I had become so accustomed to the cut and color of these clothes that it was not until now that I realized this was something foreign.

C 133 342 T 342 At the ferrying place the Tschanggu tenn kwan Wu had six native soldiers stationed and six more were at a small pass beyond it where not long before banditry had produced such monstrosities that the merchants dared to go only in bands of 60 strong when they transported their musk to China. In August 1904 (Kuangsü thirtieth year, seventh month, around the seventeenth day) these districts were struck by violent earthquakes over a period of several days, which caused the Tibetan buildings to collapse like a pack of cards. Not a single house between Tschanggu and Dawo was unharmed. The things that had been built up again were made by Chinese craftsmen. There were now stone walls to replace the old ones made of pebbles and loam, and the beams and supports were mortised properly, a thing which was unknown in local architecture.

C 133 The monastery and the town of Dawo were the hardest hit by the earthquakes. There was little to be seen of the monastery during my visit. When the columns of the temple swayed in the tremors, the monks had dashed into their sanctuary in order to exhort their gods, and especially their god Tamdin, through prayers to cease with their visitation. As a result, 40 monks had been killed by the falling temple. The roof plunged down so heavily on the worthy geslong, as though the structure had been a mouse trap with a brick on it. Earthquakes seem to be frequent in the border countries of Tibet. In the eighteenth Kuang sü year, that is 1892, the monastery ngGatag (Taining) which is a good day's journey southeast of Dawo, was completely destroyed. In 1896 Tschungkor gomba near Dschoma lhagan was ruined. I was also told of catastrophes at Li tang and Ba tang (1870), all of which occurred within the last generation.

T 361 797 Dawo again belongs to the Kungsar-Mazar tu se. (1) However, there are about 150 Chinese families living here, besides Tibetans. The former have, in the last few years, strangely enough, become

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1. Dawo or Dao, written sDao, is pronounced sTagu in the Kin tschuan dialect; the monastery is called sDao nimtsu gomba.

With the wealth of larger mammals there is, of course, a corresponding increase in the number of species of birds and insects which are unknown farther inland and higher up. C 136

The landscape which I saw along the road could not adequately explain this change. At the Heka Pass (Chinese: Sung lin kow) which I crossed the day after I left Dawo I again encountered extensive plateau steppes with smoothly sloping moraines which were reminiscent of the Ba tang Valley near Dscherku ndo and were similarly inhabited by tent nomads. Only the low large river valleys between the plateaus - which the tea route avoids as much as possible - account for the rich vegetation and bring about the abundance of living creatures. C 133 ● T 361

On the other side of the Heka Pass I left the land of Hor and came into the Ming tscheng tu se or the Dschagla (lDschagsla) rgyalbo. I was now in that large kingdom that has been able to maintain itself to this day as a result of well-timed surrender and great flexibility, in spite of the oppressive yoke of China and Manchuria, although its chief city Ta tsien lu ting has at once become China's key to the whole of Central and West Tibet. T 631

Below the Heka Pass, still in the midst of the belt of willows, the Ming tscheng king had just completed a tiao fang (Tibetan: dzong), a medieval fortress. It was a square stone structure covered with loam, four stories high with only loopholes toward the outside. He stationed one of his aristocratic bailiffs there. The soldiers and people living in the vicinity told me that the fort served as a defense against new attacks of the yellow hord of Tschantui monks. The missionaries of Ta tsien lu called it a refuge of the king against the power of the Chinese overlords, who were becoming more and more arrogant. The new fort stands in the middle of the broad trough-shaped valley like a sentry house, without taking much advantage of the terrain, and this is telling evidence of its builders' conceptions of war. T 712

/198/ Like many small kings of East Tibet, the Dschagla rgyalbo is a conservative in religious matters. For him the Nima sect is the most important. But in his valleys are to be found many remnants of the old Bönbo. My very first quarters in Ming tscheng were in the house of a Bönbo chief, and not far from it were numerous Bönbo sanctuaries. However, repeated attacks of the Tschantui had destroyed most of them in the course of the last decades and everywhere I came across ruins, burned houses and temples (1) (Plate XLIV). The T 795 C

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1. In the 1860s there was still a large Bönbo sanctuary

T 579 792

(mKanbo) of the monastery who was at the same time a sort of representative of the Dewa schung later complained against the mandarins before the throne in Peking and received indemnity for a greater part of his loss, so that the monks have since then been able to rebuild their monastery.

The chief town along with the monastery is 10 kilometers north of Basmi. At the time there were 400-500 gold washers working there.

T 175

At the beginning of the eighteenth century the Manchu had a largish garrison in ngGatag and from 1728-1734 they moved the Dalai Lama there in order to protect him from the influences of the Kalmuk of Ili and from a new attack from the north. It was always surprisingly easy for the Kalmuk to attack and conquer Lhasa, traveling from Ili on the Russian-Siberian border through the Lob desert and across the barren Tschang tang. In all, they sent four successful military expeditions across the Tschang tang. It is therefore very understandable that the English-Indian government keeps its eyes on Central Tibet and does not regard it as impossible that some day an unpleasant opponent from the north might gain a foothold in that glacis which India considers Tibet to be. Given some practical experience and knowledge of the locale it is always possible for a division of 5,000-6,000 horsemen to reach Lhasa by way of the Tschang tang, whereas the Himalaya passes are open only in summer.

T 487 485

/200/ Most of the tea caravans that travel from Ta tsien lu to Gantse and farther inland take the road through Tai ning. It necessitates setting up camp in the open several times, whereas on the western route one can halt every evening in the house of another chief of the district, i. e., a tu be hu (tu be fu) and enjoy lodgings that are sometimes quite magnificent and include picturesque castles with thick square or multilateral towers. For example, the tower of Tschamba dzong vividly reminded me of several of our oldest belfries and seems at one time to have been used for this purpose.

C 133 ●

The western route which I followed leads over terraces of boulders and broken stones. They are much cut up by valley fissures but nevertheless belong to a continuous plateau of 4,000-4,250 meters altitude. I struck good weather and for two days the peaks of the

133 Dschara re (Zarsun) and the Hai tse Shan massif (Vol. I, Plate XLIV) at my left with their present-day vestigial glaciers appeared in all their splendor. The main peak was 2,000 meters above the road. Far in the distance to the south one could see the sacred giants of the Bogungga (Plate XLV) that are much more than 6,000 meters high, while toward the west and the Li tang country there extended a steppe plateau of 4,000 meters inestimably far into the horizon. Nowhere could one see a point or peak there in the west. There was good pasture land on an endless almost level stretch, on which myriads of yaks could graze. But this plain is also just an illusion. Not only the Nya Chu (Ya lung kiang) but all its countless tributaries as well have torn up this land in a thousand places and gutted it deeply. (1)

1. On the Ta tsien lu - Ba tang road the Ya lung Kiang is only 2,730 meters high.

It is the land of Minyang where pastures are to be found as well as grain fields in the valleys, which to a large extent must supply the city of Ta /201/ tsien lu. Just beyond is the plateau of Li tang.

487 We were supposed to arrive in Ta tsien lu on May 3. From the Dzong Tschamba to Ta tsien lu is considered a day's journey, albeit a long day. However, on account of the poor condition of my animals I put in another bivouac (Plate XLV). It turned out to be a cold and damp night and we were covered with a thick layer of hoar frost, something that is unusual in the interior of Tibet. At five o'clock in the morning, when it had grown light, I rode after the others. I was just an hour's ride from the Dschedo La Pass. At six o'clock I stood on this last big pass, the actual boundary pass between Tibet and China. An endless chain of mules passed me there. One animal after another panted under a load of two bales of rice sewed in leather. They were all small, skinny beasts but they could climb like cats. The drivers were subjects of the Dschagla king and were rendering compulsory service in the form of ula with their animals. It was imperial rice, and the convoy consisted of Chinese troops that were still in the field beyond Li tang, around Ba tang and in Siang tscheng. Just at the Dschedo Pass I had run into the large Tibetan military road that leads from Ta tsien lu via Li tang, Ba tang, Dschraya and Tsiamdo to Lhasa, along which for centuries invading armies moved.

000 Even the imperial telegraph line led over the bleak saddle of

Even the imperial telegraph line led over the bleak saddle of 206 the Dschedo la and its 4,390-meter altitude. (1) The line had just been completed as far as Ba tang. My Hsining men who had never before seen a telegraph line had to conduct a detailed investigation. Of course, they had long since heard that one could send a whole letter over the wires, but they had the most adventuresome ideas as to how this was done. They wanted to cut the wire and see what the hollow space inside looked like. Shortly after I had dissuaded them from this wild idea we met a telegraph sentry consisting of six men strong. They were looking for a damaged wire because the service had been interrupted the day before. It seemed a miracle to me that one could telegraph at all at the time because hardly any of the insulators on the poles were intact. The Tibetans regarded them as a particularly suitable target for their guns as well as for their beloved stone slings.

Beyond the Dschedo Pass the eye first of all falls on bare rocky 133 ridges and on broad, planed-out and dry ravine bottoms. The peaks in the vicinity of the pass rise above 5,000 meters. They are all still below the boundary of perpetual snow and one could discover on them only scattered white spots. However, when one descends the steep, uneven military road which was paved many years ago, and when one has turned the corner and reached an eroded ravine bottom, then suddenly gigantic fields of perpetual snow sparkle in the south (Plate XLVI). In front of these in the depths nestles the Dschedo Valley with the little village of Dschedo, an important stopping place for the night for people coming from below. Before one 137 reaches this town one crosses the wide rhododendron zone /202/ which, with its large white and pink blossoms, extends down from 4,500 to 3,800 meters. The large blossoms were just opening and the steep mountain slopes sometimes formed a vertiable sea of blossoms. Long before one reaches Dschedo one is within the boundary of mountain forests, and the amount of moisture which the monsoon must unload in these border mountains has caused an almost impenetrable jungle to develop on both sides of the valley, on the northern as well as *southern slopes*.

Near Dschedo the ravine which is used by the road abandons its 000 southeasterly direction and turns due east, and now all at once there

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1. Kreitner-Szechenyi 4,499 meters; Rockhill 4,365 meters (14,320 feet); Gill 4,425 meters (14,515 feet; War office map 15,000 feet.

S.W. China AF16

my knowing it, because I was traveling too slowly for them. While I was off hunting pheasants my luggage was torn from my animals with nervous haste and loaded on the ula. I saw evil spirits that I had myself evoked, but I did not know how I might become my own master again without having them run away from me at the next corner of a mountain. 000

/215/ June 5. The weather continued to be rainy as on the previous days. We had to keep to our tents one whole day. Snow and rain ceaselessly whipped against the cotton walls. We were wrapped in a thick cloud of fog and not a spot in my tent remained dry. The soldiers left for good, cursing and scolding about the cold and my journey. Only after a week they showed up again to receive their tips.

June 6. The great highway that leads from Ta tsien lu to Tai ning runs east of the high Dschara re over a not very high and moderately steep mountain pass which the Chinese call "Hai tse Shan" because of a small lake on the pass. They have built a lodge below this pass, called "new inn" (hsin dien). The house is distinguished by the fact that in it one always finds an open, warming fire and warm smoke. However, the wanderer who is not enthusiastic about steamed, tasteless corn cakes, seeks in vain for some nourishment. T 485

In order to get to Kin tschuan from here one must turn right at the hsin dien and cross the eastern mountain chain. This second pass is called "Da po Shan" which may be translated as "mountain with the big ascent." It leads up to a saddle-shaped pass of 4, 370 meters and is extraordinarily steep on its west side which leads down toward hsin dien. On the day before we had an additional snowfall of 50 centimeters - I was very much astonished at the large amount of snow that spring can bring in these latitudes. It took us almost the whole day to overcome the difference in elevation of 700 meters and man as well as beast arrived at the top completely exhausted. T 487

On the Da po Shan I experienced for the first time in many days a sparklingly clear morning and for every step that we had ploughed upward through the deep snow, we were rewarded by a beautiful alpine panorama on the Tai ning road on the other side (see Vol. I, Plate XLIV). From the wide basin-shaped valley that opened up, black and devoid of snow, and that extended perfectly straight from hsin dien to Ta tsien lu, there arose countless snow-capped peaks, sparkling fields of eternal snow and sharp rock ridges, and above all, in supreme alpine majesty, the sacred Dschara re. At the extremities of the valley under the snow could even be discovered lustreless C 133 •

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gray, hard glacial ice. Here, too, however, the glaciers are really only miniature glaciers and, as in our native Alpine valleys, only the weak embryos of the ice masses teeming with power, that once reshaped the mountain masses into their present-day large outlines and made the valleys U-shaped and more passable for human beings and animal herds.

Beyond the Da po Shan the way soon leads into thick copses of rhododendron and into a broad valley shaped like an amphitheater. But soon there comes a steeper valley covered with fine old timber. OOd We pitched camp at the first dry spot where some grass for the animals beckoned. Scarcely had we unloaded when I fell asleep from weariness for we had all been obliged to exert our full power to help the animals drag their packs through the snow. When I awakened not very long after I was plagued by a wicked pain in both eyes, which gave me no peace. My servants said that it was still daytime and the sun was high in the heavens but for me night had come. I had become snow-blind to such an extent that I could with no amount of effort /216/ raise my eyelids. I lay in the dark tent and kicked my legs like a child, when the pain from my conjunctivitis was too great. A little black bear of the species ursus tibetanus that I had owned for four weeks and that walked about freely in the camp and at night tried to crawl under my covers, was my nurse and whiled away the time for me. He growled and scolded when I became too restless on my bed of pain, and scratched and bit in all friendliness if I touched him somwhat ungently and unmercifully as I tossed about. But he always bit me in a touchingly gentle way, not wanting to hurt me, just as a dog does that plays with its master. For a day and a half I was obliged to stay in the camp. Then at last the swelling had receded sufficiently that I could pry open my eyelids somewhat with my fingers and could recognize the necessary remedy in my medicine chest.

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361
Our trek on June 10 down along the same brook and through dense woods brought us to the town of Mao niu gu or, Tibetan: Brismed, 2,800 meters. The village is inhabited by Tibetans and Chinese and shows quite a number of old fortress towers. From the right as well as the left a rather large torrential stream flowed into our valley, and where it joined the water was so deep that it could not at any point be crossed. The forest was beautiful, high and dense. There were only isolated clearings where there had been forest fires during the winter. Old spruce trees are rare here; birches, poplars, oaks and maple predominate. Lilac trees stood in full bloom. The many

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6: Tafel--345 T-3 (1905-1908) 1914 All Tibet

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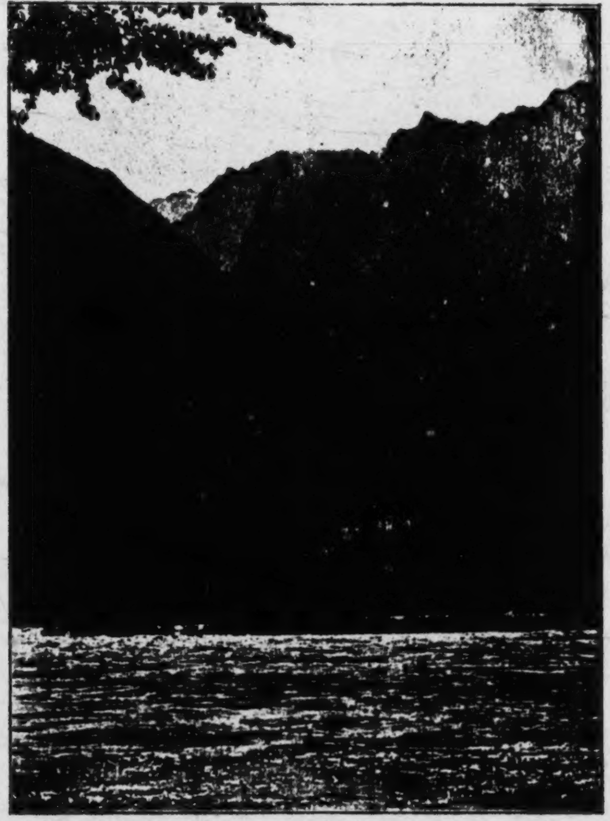
PlateLII.

/216D/

346

Small temple with tutelary gods (Hsiao kin tschuan).

133



The Little Gold River and Tschorten sa gomba.

T 361 On June 12 I reached the town of Romi (rong mi) Tschanggu, a
settlement of 300 houses on the banks of the large Gold River, the
Da kin tschuan (pronounced: Tschin tschuan) Ho, in the native
tongue: mNiëngun. The town is inhabited by many Chinese. A
Chinese official (tai ye) as well as a tu be hu, bailiff of the Dschagla
King have their residence here. The town is the market place for
the district and is situated at the place where the valley of my ap-
proach from the Da po Shan runs into the large Gold River and, for
a short stretch, turns away from its general meridional direction and
T toward the east. Here I saw many Tibetan women and girls wearing
301 heavy silver jewelry rings and brooches and red coral which are
291 plaited into their crown of black braids. The women are always
short but vigorously built, and are considerably smaller than the
native men who are also not tall. Their faces are broad and broad-
boned and yet many of the girls may be called quite pretty. The
outstanding article of clothing is their pleated, coarse, dark brown
skirt which they make from the wool of their black sheep, and which
resembles very much the dress of the women of Lolo.

T On the steep slopes of the mountains round about Tschanggu,
361 around the shops which are huddled against each other, around the
inns and yamen and the one-story Chinese houses, arise the tower
structures of the Tibetans, the individual country estates. The natives
T here still speak a Tibetan that resembles that of Ta tsien lu or Lhasa.
197 The place is very warm. The Chinese wild fan palm is already found
here. The altitude is only 1,985 meters.

T The mountain range with its yellow rock precipices towers steep
231 and sky-high beyond the dull roaring Kin tschuan ho. Nowhere
around Romi Tschanggu does the eye rest on a level field. Horses,
donkeys, and cattle have grown very lean even under Tibetan care,
T and all domestic animals are dwarfish, especially the horses which
[164] are strikingly narrow-chested and small-boned. And among people
there are surprisingly many who have goiters.

C A quarter hour below Romi Tschanggu a large bamboo suspension
133 bridge leads across the Gold River. It connects with the valley of the
Little Gold River (Chinese: hsiao kin tschuan ho), whose waters unite
with the already imposing river of the Da or Great Kin tschuan Ho,
two kilometers farther to the east. Below this juncture the river is
called Tung Ho by the Chinese, or also Yü tung Ho - after the Yü
tung tribe (1) - and later also Da tu Ho, i.e., the Great Ferry River.

000 1. This tribe lives on both banks of the Gold River between

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Plate LIV.

/224B/

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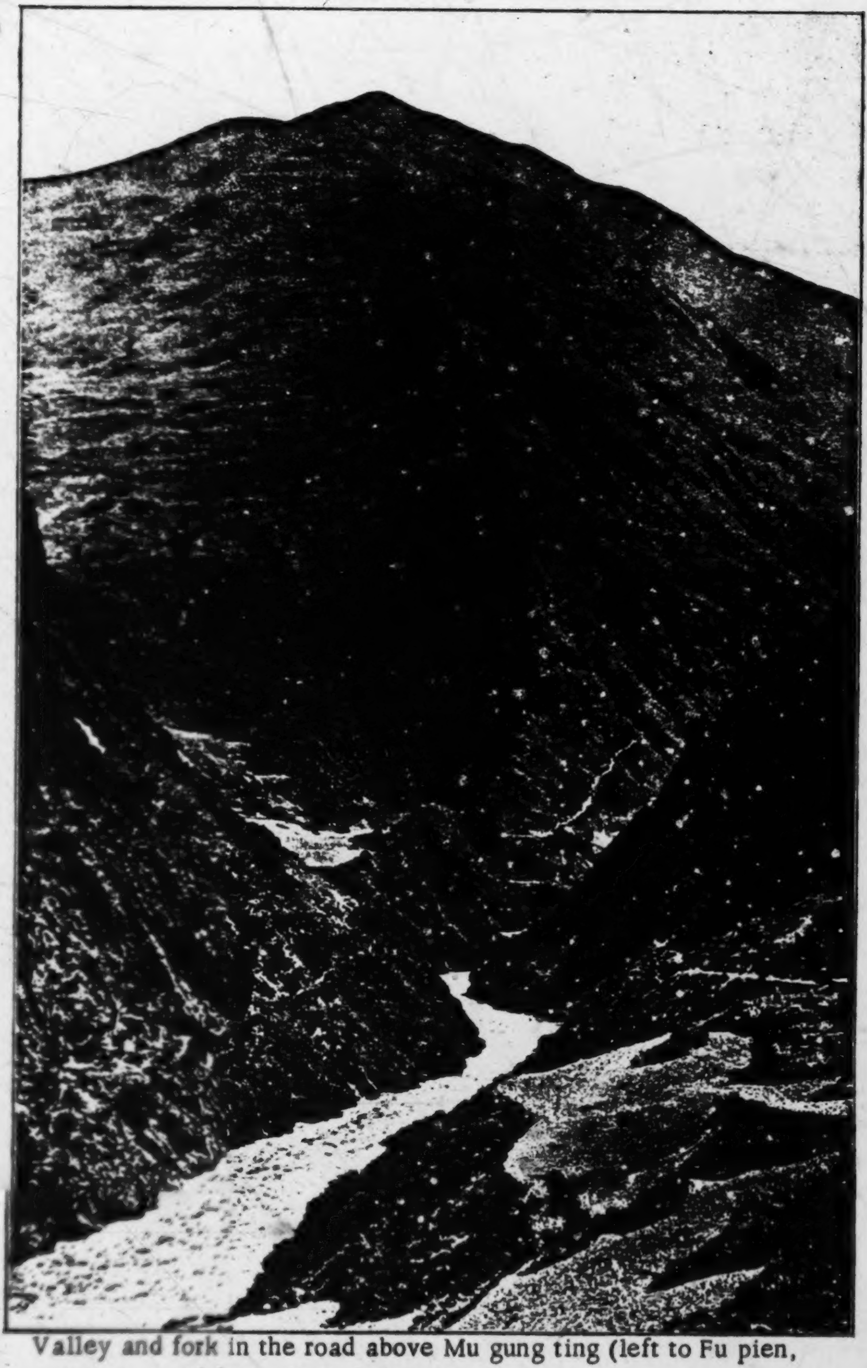

Valley and fork in the road above Mu gung ting (left to Fu pien, right to Kwan hsien).

in the eastern part of Somo, are in a sort of condition of vassalage toward him and pressed him to settle. It had become a matter of honor for him as feudal lord to receive restitution for the murdered men.

Nevertheless, my good Fu pien soldiers did accompany me as far as Tschoktsi where I arrived on June 30. My journey took me past Mu tsch'eng (Sumdo), a small monastery with few houses near the timber line (1), and then across the flat Mumbi pass beyond which I was again obliged to descend into narrow wooded ravines. On top of the pass (4,060 meters) there are ruins of fortifications that appear among snow-white rhododendron blossoms. From a point 4,410 meters high close by the road I saw an enchantingly beautiful sunset. The blood-red ball of the sun sank behind a wilderness of thousands upon thousands of bare, black jagged peaks, both large and small. It poured over all of them in a final farewell with such a flood of light that I forgot measure and distance and seemed to be gazing to the very end of the world, across a world where there was not an inch of level ground, but only crags and peaks and ridges. In the south, in the direction of the kingdom of Mu ping and the left side of the Great Gold River Valley, the peaks rose so high that they showed extensive snow fields. In the west, also, in the direction of the lands of the Tschoskiab rgyalbo, but also toward the northwest, toward Ngaba, from whence a large ravine-valley runs toward the Valley of the Great Gold River in a N 40° W direction, nothing could be seen but peaks and spikes. The lower boundary of the snow patches begins at about 4,600 meters. The larger elevations everywhere grew out of a compact mountain base of an average of 4,000-4,200 meters. /243/ Within this the large valleys lay like deep, narrow rents and fissures filled with woods, in which human beings live.

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1. The timber line is here at about 3,900-4,000 meters. Mu ch'eng or Sumdo lies at 3,540 meters and is the place where in 1749 and again in 1774 the Chinese penetrated the valley of the Great Gold River. From there it is only 60 li to the borders of Hsü tsching. The road is wide and easy to travel and is for this reason preferred by the trade caravans between Hsü tsching, Leu and Ts'a kou, Li fan fu, Tscheng tu.

C 133 I set up my next encampment on a small meadow 2,745 meters high, at the banks of a magnificent river which, I was told, bore the name of Somo Chu or Kargu Chu. This Kargu Chu is one of the chief headwaters of the Great Gold River. I found there a deep V-shaped valley running from east to west. The second headwater, a somewhat swifter river, comes from the Ngaba territory and is said to join it barely 20 kilometers to the west (below). This can only be the river course the valley channel of which I had already seen from high up. (1) At 40° W it follows the general strike of the greenish gray rock strata of the Permokarbons. The confluence is in the territory of the Sung kang rgyalbo ("s" like the French "z"), in a kingdom headed by a woman.

T 342 712 Startlingly picturesque lay the old mountain retreat of the Tschoktsi rgyalbo in front of the door of my tent, with its many verandas and other exterior constructions which hung like dovecotes on the old, crumbling masonry. Its octagonal fortress tower beside the many-storied castle - it is said to have become crooked as a result of an earthquake - reminds one of the tschiao or deivo of the warriors of the liberation (Plate LVII). But not only the princes today still feel the need of building tall structures in Kin tschuan, every single estate owner and farmer has a tower building. The ordinary farm houses are square and three, four, and even five stories high, built of field stones and tapering off toward the top. They always stand irregularly in small groups (Plate LVI and LVIII). The back of the house which is at the same time usually the north side is one story higher than the front and is covered with a saddle-shaped shingled roof, weighted with stones, the ridge of which runs from front to back, giving the house the appearance of old Swiss houses. However, the shingled roof is always but loosely connected with the rest of the house; it is only meant for the years of peace and for the heavy summer rains. Since it rests only on a light framework of beams, it can be easily thrown overboard as soon as a state of open warfare exists. Then the farmer is in possession of a small stone fortress. Under the

1. The Ngaba Chu is said to flow from Ngaba Tsenda to Ngabe Metsang and farther down alongside it lies Ts'arima, then Warats'argo (the linguistic frontier of the Hsi fan and Kin tschuan languages) Tserh'ka. Tsam tang, Itoh'gomba, Schirh'dsong gomba, and rDo Tir Chu tschen gomba.

6: Tafel--405   T-3   (1905-1908) 1914   AJ1 Tibet

Plate LXII.   /248 (B-1)/   S.W. China AF16

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Loess landscape, terraced loess fields and loess ravines on the road between Ho tschou and Tao Ho.

Valley of the Little Gold River
with road to Romi Tschanggu

Hsin gai tse. Mu gung ting.
Ying pan gai.

6: Tafel--406 T-3. (1905-1908) 1914 AJ1 Tibet

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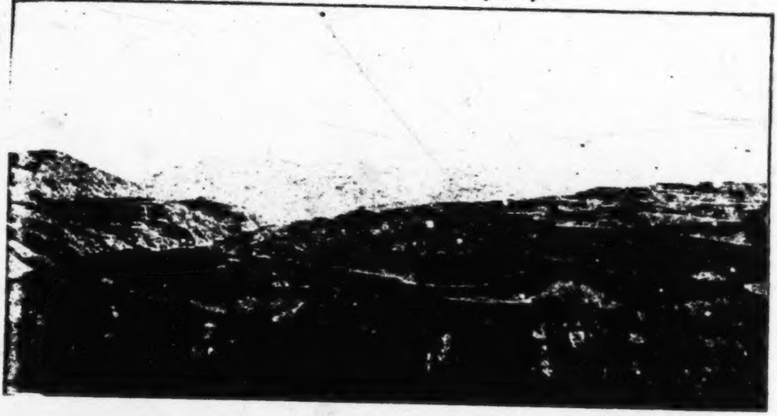
Plate LXII (cont'd) /248 (B-2)/

• 133



T C 751

During my stay there was an old Chinese physician in Ma tang, who for more than a lifetime had traveled through here each year and who was well-known among young and old. He was a smallpox specialist and on his travels applied the old Chinese method of variolation. In small bamboo tubes he kept human pock lymph with which he "inoculated" or, more accurately, infected, all children up to 12 years that were brought to him, for 300 cash. He put a few drops of his liquid into each child's nose whereupon the children fell ill of smallpox (variola, or, in the native language, dabram) after four or six days and had up to one or two dozen pock efflorescences on their faces or on their chests. He always got his lymph back on his journeys by pricking open individual pustules before they dried up, and gathering the contents. He chose sick persons who had as few eruptions as possible, but beside that he thinned out the lymph with water. The man's opinion was that by means of this dilution he had first of all succeeded in preventing the severe pox among his patients and that they recovered within a week. I was told that throughout Kin tschuan this variolation method is practiced and that if only part of the children in a village are "inoculated" and the rest become infected without having been treated by the specialist, then the ones who were not vaccinated had severe cases of smallpox, a true variola; furthermore, that the variolation caused much severer symptoms among adults than among children under 12.

C 132

My long-drawn-out wait for the messengers of the Li fan yamen was interrupted by several excursions to the nearest mountains, whenever the weather permitted. As a rule it rained many hours every day, if not all day and all through the night. The time of the summer solstice means the rainy season for the entire eastern Tibet, especially for the southern portions. For days the sky is covered with rain clouds; and scraps of fog, the worst enemies of topographers, hang low in the valleys. C 133 If I climbed south from my campsite up the Tsche kou (eat-bitterness) Pass and from there to the nearest mountains I reached the flat mountain formation a little beyond 4,250 meters the base, from which rose the row of peaks with their slopes of rock fragments and isolated snow patches. I stood on meadows there which were smoothly sloped, broken with swamps and dotted with rounded knolls (roches moutonnées). But already below 4,000 meters, at 3,700 meters, the valley floors widened and were more trough-shaped than at the market place of Ma tang, which still lies wedged in, causing cold in winter and lack of sun, about which the inhabitants complain bitterly. Beginning with 3,700 meters most of

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• 133 the valleys take on a character which indicates that they were formed by agents very different from the torrential streams which today carry on their undermining work of erosion. In the upper parts of the ravines I could often observe here a terraced ascent of the valley floors, in which each level brought about a widening of the valley.

/250/ Shimmering vertical slabs of greenish-gray sandstone mixed with isolated streaks of limestone and with a strike of N 40° W to N 50° W here form the basic rock, and on the plateaus at 4,200 to 4,400 meters, just as in the region of the headwaters of the Hwang Ho, one walks over bands of quartz and strata heads that often project, as sharp as a knife, out of the thin surface cover of detritus. At almost right angles to the strike of the rock - N 20° E - one sees countless clefts and fissures in these heights, barren of vegetation. The direction of these clefts (N 10° to 20° E) always plays an important rôle in East Tibet and on the entire edge of the Tibetan Highlands opposite the point where the red basin of Szechwan breaks through, as well as on the terraced edge of Liu pan Shan-Lo Shan (in Kansu), on the Ala Shan and even in the mountains of Shansi. The latter were the determining factor in the north-south course of the Hwang Ho, which we discussed in Chapter II. In such clefts and fissures the huge Tibetan mountain folds, the entire Kuen lun, sink eastward into the depths. In some places the crack is so high at the edge that has broken off that we see "step faults" forming, as for instance, at the boundary of the Szechwan basin. But usually it is only a question of a barely noticeable sliding off and sinking, and to me it has the appearance as though the mighty block of the large Kuen lun rump were, in the main, only twisted toward the east and the N 20° E cleft were comparable with the small oblique fissures and cracks of a glacial stream. Many longitudinal valleys at the uppermost part of the Hwang Ho follow clefts that run N 20° E, and east of Ma tang and throughout Kin tschuan the rivers and streams often follow this direction of the clefts, and have eaten their way into the depths at an angle almost perpendicular to the strike of the rock strata.

000 I waited until July 15 in Ma tang. That was as long as my patience held out. On the morning of this day I could no longer be held back. Free as a bird, I again set out for the "Ts'ao ti." Soon after my arrival in Ma tang, it is true, I had heard that two yamen couriers from Li fan fu had got through and had marched on in the direction of the Somo castle bearing some written document concerning my journey. I had already let my hopes run high, but another six days went by and I neither saw nor heard anything more about

them. They had vanished somewhere. On one of the last days I had met the Nirba of the Somo King in the village and he had again announced to me that the King refused to do anything for me. He had never granted Chinese, to say nothing of foreigners, free escort through the territories of his vassals, and he said that I should travel alone just as all Tao tschou Hui hui did. 000

Besides my Brdyal, I had taken a man from Somo and a Kretschiu boy from Ma tang to accompany me on my new journey; the former was called Ts'an Rarschdan, the latter, an attractive, good boy, called himself Yangsen. We left camp at seven o'clock, rode past the houses of Ma tang where my little train of six horses and five mules were joined by a Ho tschou Mohammedan and a merchant by the name of Ma who rode a lively, well cared-for little horse. We recrossed the old bridge to the right side of the valley of the Somo River and then up the mountain, following the winding, big, noisy torrent. During the first hour the valley is still very narrow, but alongside the ditch which is bordered by a magnificent spruce forest, there now runs a good and well-worn, broad yak road, /251/ the upkeep of which is taken care of by the Ma tang merchants in the interests of their trade. In brief succession we met two yak caravans with 100 animals, carrying wool and skins. Half-naked men from the steppes, such as I had not met since I left Dergi drove the animals swiftly past us. The goods belonged to a Sung pan Mohammedan. The drivers came from Khorgan. Once again they were genuine, bad Ngolok.

After two hours we came to the little town of Karlang where there are eight sprawling houses. Not far from it at the left lies the modest Bönbo monastery of Kang mer gomba. On the left bank, opposite, there were still a few farms and barley fields. But the other bank, meanwhile, had become much more devoid of trees. Later the bottom of the valley opened up more; the slopes became less steep and the woods on our side noticeably more dwarfed. The river valley had now reached a height of 3,300 meters. The nomad country had begun. T 361 C 133

Three hours traveling above Ma tang the yak road turns away from the right bank. A bridge built in the national style, the last and the one situated highest up, brings the road across to the other side. But this one, too, had succumbed to the summer rains of this year. Its northern abutment had been undermined. Its cantilever, artfully constructed of stone blocks and pile work, had settled a little and the three spruce trunks that spanned the river had slid off and been T 491

T 278 Their daily earnings are said to amount to 20 to 30 taelcents and at best, 70 taelcents. A pound (600 grams) of be mu (Tibetan: Gar lo), for example, consists of 3,000 to 4,000 small roots, white bulbs of the Coelogyne Henryi, which must be found and dug out one by one. In Ma tang and Li fan a pound costs up to two taels. The little roots are a Chinese culinary delicacy.

C 133 I had a splendid view from a rise along the road. Far to the south and the southwest I was given a farewell greeting by the large black Somo Mountains with their numerous peaks which consist of green argillite sandstone and rise 5,000 meters upward. From the Ma tang region they extended far to the northwest so that 80 to 100 kilometers from my vantage point they looked as though they would continue into Tibet with a more east-west strike. They are the eastern ends of the Ba yen ka la Shan of Chinese cartography. (1) In front of them and extending immeasurably far to the north there is a green jungle of hills and mounds, valley plains and small mountain chains. There was not a single mountain there, as far as /258/ the eye could reach on that clear day, which was higher than 4,400 meters. This section of high plateau cut up into hilly country, is today the water shed between the large Yangtze and the Hwang Ho. It is only very gradually - as I noticed on my previous journeys - that the land gets higher toward the west, so that near Horkurma, finally, the floors of the deepest valleys reach up beyond 4,200 and 4,300 meters and the mountains up to 4,600 to 4,700 meters. All this country is the home of the free and audacious Ngolok and their countless fat yak herds.

In back of me, in the east, in the direction of China, there were somewhat higher mountains. There was granite to be found there and it formed a few peaks of close to 5,000 meters. Glacial marks were unmistakably visible even in this hard granite. All the valleys there were shaped like broad troughs and the entrances of the valleys revealed basin-shaped bottoms. In the meadows beside the tent village

C [103] 1. Ba yen ka la schan is a designation borrowed from the Mongolian. Ba yen (Mongolian: bayan) means "rich"; ka la (Mongolian: khara) means "black." In Chinese geographies and even in their primers these words have for a long time referred to the mountain range forming the water shed between the Yangtze Kiang and the Hwang Ho within Tibet. It would therefore be wrong to try to introduce a new name.

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of Upper Zanskar there were still to be found large erratic boulders which came from these highlands in the east. 133

On our journey we again were obliged to struggle with the worst swamps, and the way was badly marked. For long stretches it was completely unrecognizable. Added to the strenuousness of breaking through the tough mud, there were seas of boulders which became dangerous for the legs of the animals because of countless crevices and deep fissures. In the afternoon the caravan halted, completely exhausted, in a naka field on a mountain slope.

July 20. I did not sleep very much during the night, because I was sure we were going to be visited by some of the root-diggers and I was bracing myself for the visit. According to my experience, I could expect them at either of two times: as soon as darkness set in or not until around midnight when the moon would have disappeared behind the granite peaks. 000

I sat in the doorway of my tent keeping myself awake by a violent effort, and my thoughts flew far, far across the whole continent of Asia to my home from which I had again had no message for such a long time, and no newspaper. Now and then a southerly breeze blew over me. The horses rattled their leg chains as though they were chained convicts. A night bird interrupted my revery and brought me back to my loneliness with a start. Some little feathered friend was suddenly awakened, chirped with fright two or three times. Then for a half hour nothing could be heard but the grains of sand driven by the wind. It seemed to me as though I could see as well as in broad daylight. The thousands of round pools below me shone like shiny dollars in the cold light of the moon. In the pale stillness the smoothly polished, loose granite blocks do not cease conjuring up phantoms before me, which again and again dance noiselessly down the mountain side.

Finally the moon began to sink. Scraps of dense fog drifted from the west into my valley. In a few minutes we were enveloped in blackest night. I now lay in wait, more tense than ever.

Again and again I rubbed my eyes, as though by doing so I could better penetrate the darkness. But soon my restless thoughts wandered off again, into the future and into the past. Suddenly old Tschimo who had been curled up close beside me, snoring, got up and for a long time sniffed in the direction of the valley, then took a few leisurely steps forward, looked about again and then disappeared without a sound into the darkness. If only dogs could talk! Perhaps she only sniffed some game! A roaming wolf may have driven the

000 antilopes into the valley. /259/ Now Neh'ere comes up to me. He is fawning, he wants to lick my hand, a thing he considers necessary to do several times each night. Suddenly it seems as though he had been given a blow, and with loud barks he runs after the old bitch into the valley. A hundred meters in front of me are two large pools. From that direction comes a splashing sound as though a heavy body were sliding into the water and in the same direction - isn't that the light of a firefly I see? - In rapid succession I fire three sharp alarm shots. They are only meant to say "watch out" and to give due notice that someone is on the alert. Thereupon the spashing sound becomes plainer down below in the pools and amid the ugly howling of the dogs I hear a few obscene Chinese swear words. Soon all is again quiet as the grave. And thus it remained until dawn. I arose late and set out for my saddle in the mountain which lay at an altitude of 4,390 meters, buried between bare granite crags of 400 and 500 meters (Plate LVIII).

C •133 From this saddle there extended a giant trough of granite due northeast. It was 30 kilometers long. All the lateral valleys which ran down from the surrounding granite mountains came to an abrupt end 150 meters above the floor of the main valley, and all the water they conveyed had to run in shallow, narrow channels down the walls of the trough-shaped valley. On the slopes and in the broad bottom of the valley round granite boulders formed expanses of rock alternating with moors, which made it very difficult for the caravan to make headway. Every quarter hour some animal would get stuck or slide down the round cliffs and into a rock fissure from whence it had to be pulled out and reloaded. We found no habitation here and no trace even of temporary dwellings. It seems that only occasionally people pass through the valley. Only marmots and countless rabbits inhabit the tall grass of the pastures and the many beautiful larch woods (Plate LIX).

C 137 On July 21 the woods gradually grew more dense. When we came to a point just below 3,700 meters the valley floor became narrower and more like a ravine, and the tall spruce timbers became an absolutely impenetrable virgin forest. At 3,600 meters - we had just a moment ago come across sandstone with a N 70° W strike - we found pastures between the forests and soon after four black tents. The way

T 361 + [241] now became a well-worn path, but it went on for a long distance, so that it was three in the afternoon before we arrived at the first houses of Merge. Barley, oats and potato fields appeared in the midst of the pine forest, and two-story houses covered with shingles and

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000 Much as I respected the viewpoint of the mandarins, I could not see why I should not travel a path that hundreds of merchants took every year.

361 While my new preparations were going on I had ample time to become acquainted with the city of Sung pan ting. China has only three first-class outpost towns toward Tibet: Ta tsien lu, Sung pan, and Hsining. Strictly speaking, all three of them are on non-Chinese territory. They are the termini of military roads along which the Chinese have settled; on the branch roads, in the nearest forest ravines and mountain valleys, the Tibetan princes are still fighting for recognition and to maintain their individuality. All three cities are also important centers of Tibetan commerce and it is characteristic for all of them that this commerce is largely in Mohammedan hands.

Ta tsien lu is built extremely close, and slippery flagstones and stone steps make it difficult to ride horseback. It resembles a South Chinese city where the pedestrian, the porter, sets the pace. Hsining fu is a North Chinese type of city. /276/ It has extremely wide, dusty streets running between low houses of tile and loam. In its style of architecture Sung pan ting occupies a place exactly in the middle. There the valley of the Min kian which flows in mighty waves from north to south, is almost a half kilometer wide and the river makes a large loop from the left to right of the valley (Plate LXI). In the valley, just as in Fu pien, one finds traces of contaminated loess, and this again on the west side of the valley, i. e., the side which is protected against the winter storms from the west. (1) The road that

• [133]

/Fig. 13 appears on p. 276 of original text. / leads up from the lowland of Szechwan and that has kept to the left side of the valley from Kwan hsien on, here crosses the Min. Wooden rafts can navigate the magnificent river, but not yet any boats. The two shores are connected by a large covered wooden bridge with small shops on it like a Ponte Rialto, and around it lies the strong-walled city. As usual, the walls consist of thick tiles filled in with earth. On the west side it continues up a steep incline of the low foothills and ends high at the top in a temple, so that it would require tremendous masses of

1. As though the west winds of winter had deposited their dust masses in the protection of the mountains and the diminishing eddies of air, in the recoil after the impact against the opposite wall of the valley.

T 291 jewelry, the men with braids or short hair. Their eyelids do not have
302 a distinct fold and their eyes are straight. The women were uncombed
[142] and had blond or faded brownish tresses. It is exceptional for them to
have the blue-black hair of which the Chinese are always so proud.
T They are the same type as the Yao tse of Hunan. They are a poor
143 race, a remnant of the original Chinese inhabitants, who make a
meager living with a few pieces of copper, gather grass on the mountains and sell it to the people of the city, and who now here, now
T there, seek and find a regular pariah livelihood. If there has been
674 pillaging or a theft, every man from Sung pan says quite thoughtfully:
"A Bo lo tse has again committed a crime." At the time of my visit
the chief of this tribe, whose land lies south and southwest of Karlong
in the lateral valleys of the Lo hoa River which comes down from
Merge, was a captive in the yamen of the ting. He was discovered to have been privy to the robbery of a Chinese merchant, had
allegedly approved of the theft on the one hand, but had also wanted
to make a few purchases in the city. On one of his visits to the market
he was arrested and without much ado put into prison by the Chinese.
T Linguistically, the Bo lo tse belong to the barbaric peoples of the Chi-
197 nese border, who must be classed among the Tibetan language family.
The Bo lo tse language is most closely related to that of Ts'a ka lao.
C The border Chinese maintain that they can clearly recognize a member
of each tribe by his dress, the type of weave, the cut and the lacing;
563 but I was unable to find anyone who could really give me accurate
information about this, which he had not gathered from hearsay. Most
of the so-called experts were content to tell me: "The Bo lo tse are
thieves and robbers and not one of them is going to enter my house."

C East of Sung pan ting the mountain peaks rise higher than in the
133 west, in actual Tibet. There the Schar Dong re (or Schar Derung re)
which the Chinese call Hsüä bau, rises up to 6,000 meters and reaches
up to the realm of perpetual snow and ice. However, the kingdom
begins a few hundred meters below the peak in the same geographical
latitude as the city of Tripolis. The Schar Dong re is rather isolated
and is therefore regarded as very sacred and considered a brother of
T the Amne Machin. Surrounding it are a number of Tibetan monasteries,
792 such as the Ka tschung gomba, to which the devout flock even from
788 the distant Ngolok country and from Ta tsien lu, in the sixth Tibetan
or Chinese month (April-May). They also come for the reskor, that
is, to encircle the entire mountain which takes three days. In the
/278/ late fall and during the winter the inhabitants of the steppes
wander through Sung pan ting to the sacred O mi Shan in the southern
part of the province.

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T 487

latter already belong to the Dschoni tu se.

always very nervous. When we came to /284/ a more dense wood he sent his Tibetans ahead as scouts in order to have them search the bushes, and within an hour he often announced six times to me: "It's not safe here." "We had better not speak so loudly here." "It would be well if I cocked my gun here."

C 133

After that the way became steeper, there were more and more bends in the valley until we stood in front of a steep slope of 200 meters, formed of sand and rubble, not unlike the remnant of a moraine. But even this steep slope caused no difficulties. When we arrived at the top - we had reached an altitude of 3,860 meters - we had a far view to the north-northwest. From our vantage point a broad valley plain studded with thousands of pools opened up - a yung like the Ma yung and Tso' ngombo yung in the north - framed by green hills. It was as yet impossible to see where this valley plain begins to dip. But a large lab rtse with hundreds of poles carrying small flags and bits of wool up in front on the steep edge showed that we had reached an important point. The Tibetans call it Gari La. It was - as I later convinced myself - the water shed between the Yangtze Kiang and the Hwang Ho. We stayed here a brief half hour; my Tschang La men (Bönbo followers) threw lung schda papers (see Fig. 18, Vol. I, p. 548) into the air and stuck a new flag into the pass lab rtse. This little flag had previously fluttered gaily on the fork of one of their guns and had been brought along especially for the god of this pass, a particularly mighty mountain spirit.

We followed the grassy plain. The entire country, mountain and valley, was a single succulent green prairie. The grass of these pastures was soft, and the hard stalks of the grass of Tsaidam and the Koko Nor were not to be found. In many places the earth was boggy and black or looked like a naka field. As we rode on we found the source of a small, clear brook which soon began to twist and turn this way and that in thousands of bends. The soldier from Tschang La, Tschemo Tscho called it the Re Chu. This plateau was also uninhabited. Nowhere were there settlers to be seen, nowhere did an old tardo (tab rdo) appear, or did we discover remains of old nomad colonies. Our way wound around swamps just as the brook meandered about in the most fantastic curves. The valley floor of the Re Chu consisted of deep marshes on which we could not set foot with our animals. We were obliged to ride along the foot of the hills, and thereby lost a great deal of time. But even so, the animals were

C 133 completely exhausted from constantly breaking through.

On August 26 we rode for only two hours. We saw not a soul anywhere. Not a single wild animal, not even a little fox or an antilope was to be glimpsed in the numerous ravines and gullies. The brook in our valley had become a small river and was 12 meters wide; the valley, too, had constantly grown wider. Our new campsite lay in the Niendorba Plain which showed absolutely no signs of habitation. Not far from it a road track runs due west over a very flat pass. If one follows it, one can in five days reach Ngaba Metsang (Middle Ngaba) with its houses and fruitful fields of loess and its 12 sub-tribe nomads.

T C 669 Here I asked to be told about the punitive expedition of 1902 against Ngaba. It furnished a whole day's subject of conversation for my companions, for they had all taken part in it. This "war" had also begun in the customary fashion. The chief - with the title of rgyalbo - /285/ of Ngaba Metsang had robbed merchants from Sung pan ting and at their complaint before the ting he had not given up his plunder. He felt so secure in the midst of his barley fields and stone houses that from now on he let himself be addressed as "emperor" (gong ma). Thus the Sung pan yamen, with the approval of the central government, levied troops and sent 800 men up into the Ts'ao ti, under the command of three majors. The troops were apparently well armed and their weapons consisted of newly-acquired Mauser and Hotchkiss guns; but not a man of them had any idea of how to handle the guns. It was not considered necessary to drill the troops, nor did it occur to the officers to let their motley crew, of which only a very few had ever had a gun in their hands, practice a few shots at a target. A few of the Tschang La men had secretly aimed their new weapons at some stones and had for this been given 50 blows in the place that is usually covered with trousers. Again the idea was to proceed in typical Asiatic-Chinese fashion and only bluff. In spite of the poor roads, the gentlemen majors let themselves be carried into the field by their subordinates in sedan chairs. Everything went smoothly until they came within 50 li of Ngaba where they set up a fortified encampment.

The officers thought they could negotiate with Ngaba from their encampment, and when the Ngaba chief did not appear for this, 500 horsemen were sent ahead to invite him. But that is exactly what the Fan tse had been waiting for. They marched into the field, allegedly 1,700 to 2,000 men strong. Their horsemen were dressed in coats of mail and thickly padded jackets which gave very good protection against ordinary bullets. The Chinese horsemen who were supposed to fetch the chieftain and who had been told as a matter of encouragement